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ABSTRACT

The factors influencing demand for vocational education and training (VET) courses in Australia by individuals, enterprises, industries, communities, and regions were examined through a review of Australian and selected international research. The following were among the key findings: (1) current definitions of "industry" may not be effectively identifying training needs; (2) motivations for participating in VET can stem from the labor market and/or from social or personal development concerns; (3) benefits from training have been understated; and (4) the public system continues to meet most demand for VET. It was concluded that achieving high levels of skills formation requires the following items: commitment from government and a large majority of enterprises; widespread public support; accountability to ensure an adequate quantity and quality of training; opportunities for all to participate; incentives for young people and workers to train; and flexible training methods. The following were among the areas identified as requiring further research: the impact of the price of VET on demand by various client groups; the desirable balance between general and job- specific education and training; and the most effective ways for meeting the increasing demand for literacy and numeracy training for individuals not currently accessing training. (Contains 117 references.) (MN)

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review of research

factors influencing demand for vocational education and training courses

S Kilpatrick
K Allen

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factors influencing demand for vocational education and training courses

Sue Kilpatrick
Kim Allen

NCVER

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executive **summary**

This review of research covers Australian, and some international research relating to factors that influence demand for vocational education and training (VET) by individuals, enterprises, industries, communities and regions. It examines the scope of research and reveals the gaps which need to be addressed by future VET policy and research.

Demand for VET refers to the intended and desired participation in VET programs. Individuals, enterprises, industries, communities, regions and the nation are stakeholders in VET.

the **main findings**

Policy has focussed largely on VET and the world of work, neglecting notions of learning to improve quality of life and knowledge. The needs of industry receive primary consideration in national policy, although usually it is individuals or enterprises, not the industry as a whole, who 'demand' training. Current definitions of 'industry' may not be effectively identifying training needs, whereas recognising occupational groups with similar functions may show demand for VET courses more clearly.

Individuals, communities, industries and the nation have a longer-term view of their training needs, and are increasingly looking for 'life skills'. Motivations for participating in VET can stem from the labour market, and/or from social or personal development reasons. Learning for life requires literacy, numeracy, personal skills and positive attitudes, skills which are transferable between different work situations, and which are also translatable into non-work situations.

Social rates of returns to training, or benefits from training, have been understated. Recognised social and individual benefits include: increasing social capital and social cohesion, improved sense of personal worth, lower crime rates, increased community service and improved quality of civic life, greater appreciation of diversity, and improved ability to use technology and react productively to economic shocks.

Most demand for vocational education and training continues to be met by the public system. There is evidence that the public system is better able to provide support, especially in literacy and numeracy skill development.

There are benefits to enterprises from structured training, including increased ability to adopt new practices and technologies, increased productivity and increased viability and survival rates. New firms are less likely to demand training than older firms. Larger firms participate in formal VET to a greater extent than smaller firms. Small firms tend to demand training that is directly related to production, whereas large firms can devote more resources to training in management and support functions.

Clients in rural and regional Australia have less choice of courses and providers, being limited by access to facilities and the flexibility of the services offered. This means not all demand for VET is satisfied. Local planning and provision of VET can result in more accurate identification of demand and hence more satisfying outcomes for the community and the region involved.

expected changes in demand for VET

There has been little recent quantitative work on demand for VET in Australia.

Skill areas where demand for VET is expected to increase are: skills for 'knowledge work' (working with ideas, design, innovation, marketing, monitoring and management); 'soft skills' (conflict resolution, leadership, team-building and workplace communications); and literacy and numeracy skills (especially embedded in other courses).

Demand from non-sponsored individuals will increase, as will demand for courses that can be taken in short chunks with seamless entry and exit from VET. Demand from enterprises for entry-level training is expected to fall.

Demand for VET could be increased by: a network of training brokers to analyse needs and negotiate with providers on behalf of enterprises and communities for suitable training; continuity of funding and programs; more accessible information for enterprises, especially small businesses, individuals and families; greater awareness of and easier access to recognition of current competence; and clearer, simpler VET administrative arrangements.

conclusions drawn

To achieve high levels of skills formation there must be commitment from government and a large majority of enterprises, widespread public support, accountability to ensure an adequate quantity and quality of training, opportunities for all to participate, incentives for young people and workers to train, and flexible training methods. Measures that would help meet the VET demand from the large equity sections of VET's client base include customised courses for various groups, flexible timetabling and flexible delivery. Clients need information about entry points and pathways. Clear pathways between ACE and VET increase demand for VET. Teaching professionals need to work with industry and enterprises in order to increase demand by developing relevant training. They must understand the needs and everyday experience of small business.

The focus of the current policy on the needs of industry and enterprises should be re-evaluated in the broader context of the demands of other stakeholders who have longer-term interests.

areas for **further research**

Economic and social factors contribute to the demand for VET. Research has been undertaken which identifies the influence of economic factors, such as income and profit or productivity on demand and there is a small body of research noting that social factors such as personal fulfilment contribute to demand. The relative contribution of economic and social factors to the demand for VET by various stakeholder groups requires further research.

There is no systematic research into the impact of the price of VET on demand by various client groups (in particular enterprises and individuals). Such research is potentially difficult because of the large number of other factors that impact on the willingness and capacity to purchase VET. The many changes over recent years in the level and nature of government contribution to VET in terms of subsidising prices and reducing costs (by extending government benefits to those participating in education and training and introduction of a training wage which reduces enterprise costs), have contributed to the difficulty. Further research is needed into the relative cost of modes of provision, and whether the preferred unit of analysis should be cost per trainee, per module or per course completed.

Potential changes to the ways in which individuals pay a contribution to the cost of their own VET suggested, for example, by Chapman (1998) should be

preceded by investigation of the extent to which upfront fees prevent or discourage individuals from participating in various levels of VET and from enrolling with particular provider types, for example, TAFE, ACE and private RTOs. Further research into the sources of financial support for the living costs of VET students should also precede such changes, especially in view of Gregory's (1995) suggestion that demand for education and training is based more strongly on the cost of an extra year of education than on expected future earnings.

In light of the debate about the relative desirability of general education and job-specific training for senior school students not destined for university noted in the chapter 'Demand by school students and their families', further research is needed into the desirable balance between general and job-specific education and training. In particular, the role of context in learning generic skills and in the transfer of skills between school and work and between jobs deserves more investigation. A better understanding of how generic skills are acquired, transferred and applied in a variety of contexts will lead to more informed demand for generic and job-specific VET products, and hence better outcomes from VET. Another gap identified in the research is the nature and extent of unmet and unarticulated demand for VET by those not completing senior secondary school, and whether this should be addressed through the school system or by other means.

Demand for training in literacy and numeracy is expected to rise as jobs increasingly require higher levels of these skills. The research had identified a group whose literacy and numeracy skills prevent them from participating fully in economic and social life and are not currently accessing training. More research is needed to investigate the most effective ways of meeting the increasing demand for literacy and numeracy training for this group.

The long-term national consequences for international competitiveness and national income of investment in training that is at a low level and is enterprise-specific is an area for future consideration. There is considerable scope for further research in this broad area, which could include inter-country comparisons, large-scale longitudinal Australian studies and case studies. Further research is needed to investigate whether the overseas experience of enterprises subsidising generic skills is mirrored in Australia.

emerging **issues**

Individuals suffering from literacy and numeracy deficiencies are increasingly disadvantaged in the labour market. This disadvantage extends to the VET system,

where there are problems in accessing and successfully completing other training. This is one area of increasing demand where VET policy-makers need to consider courses which include a component of literacy and numeracy support. Negative experiences of school, low self-esteem and models of learning that assume a high level of literacy and numeracy repress demand by a large number of potential VET clients, including many Indigenous Australians.

Current perceptions and traditional performance measures of learning are narrow. Learning which supports self-esteem, personal development and personal value in order to promote a learning society would increase demand for VET.

There is concern that the quality of education and training and assessment (VET products) is being eroded by the proliferation of registered training organisations (RTOs) and user choice, especially where training is undertaken exclusively on the job. User choice policy has focussed more on providing clients with choice, rather than much needed support in articulating demand and negotiation to meet needs.

In future there will be more demand for VET from non-enterprise-sponsored individuals who will require constant involvement in training because of the pace at which work is changing. Many non-sponsored individuals have no real choice of provider or ability to influence content or delivery because of their inability to pay. There has been a shift towards a greater concentration of young adults in small firms that tend to provide (demand) less training, and less generic, transferable training. Clients with multiple disadvantaged backgrounds are the most disadvantaged in terms of access and choice.

Lack of continuity of funding and programs is the single biggest barrier to enhancing participation in VET and to achieving beneficial social and economic outcomes. Consideration of small business, regional difference, and the balance between the short-term needs and demands of enterprises and the longer-term needs of employees and individual clients is required.

Supporting training brokers in negotiations between clients and providers will increase demand for VET. Networks and leadership that includes a brokerage function are emerging as key factors in assisting individuals, small business and communities and regions in articulating and meeting their demand for VET.

context

what is **demand for VET** and **who demands it?**

Vocational education and training (VET) is a tool for meeting often conflicting economic and social goals. Demand for VET motivated by economic goals stems from the income that accrues to those individuals, enterprises, communities, regions and nations that possess superior skills and knowledge. Demand motivated by social goals stems from a desire by individuals to achieve their full potential and contribute to social and cultural development (Ferrier & Anderson 1998, p.1). There is evidence from a study of the role of VET in communities in regional areas that VET is not effective in attaining economic goals unless it also fulfils social needs (CRLRA 2000).

Demand for particular goods and services in the global and domestic economy translates into demand for particular skills.

Demand for particular goods and services in the global and domestic economy translates into demand for particular skills. VET is one means of acquiring skills. Higher education and informal learning from others or experience are alternatives. The focus of this publication is on demand for structured training and assessment under the Australian Recognition Framework (ARF) (formal VET), and training which is structured, but not under the Australian Recognition Framework (non-formal VET). Examples of non-formal VET include programs offered by Commonwealth and State departments of primary industry, adult and community education courses and structured on- and off-the-job training provided by employers (not as part of an ARF qualification). Information about the Australian VET system, ARF, the range of VET products in the market and amount of VET delivered or consumed can be found in *Australian vocational education and training: An overview* (NCVER 2000).

This chapter discusses the definition of demand for VET and then briefly considers the reasons that motivate VET stakeholders to demand VET, issues that are discussed in more detail in subsequent chapters. The difficulties of predicting

demand for VET are presented. In order to describe the context of this review of research into the demand for VET, sections on the extent of participation in VET and the influence of government policy on demand for VET follow.

The research literature drawn on in this publication is principally that related to Australian VET published since 1990, with an emphasis on that published since 1995. Some Australian research related to other education sectors is included, as is a small amount of relevant overseas research literature, particularly in relation to demand for training by enterprises. The research literature was identified through searches of a number of Australian and international literature indexing databases covering the social sciences, particularly education and economics.

definition

A major study of demand for VET, undertaken by the Centre for Economics of Education and Training (CEET 1998), notes the economists' definition of demand for VET would be 'the quantity demanded at a given price' (p.2). However, this definition ignores the role of accessible and appropriate supply in shaping demand, as well as ensuring that demand for VET is satisfied. Information, the nature and range of training available at particular times in various locations, funding and preferences or tastes, all shape the nature and extent of demand by individuals, enterprises, industries, communities and regions independently of the 'given price'.

The price of VET is a complex issue. VET is not a single commodity, but takes many forms, each with different prices to different groups and individuals. Enterprises, students and the society as a whole through State training authorities, are purchasers of VET. Often a single VET course is jointly purchased, and demand at any point in time, especially from enterprises and students, is partly determined by the level of government price subsidisation. VET is free to students who train in their work time, but the cost of VET to their employers includes production foregone. The cost of training for students who are not sponsored by an employer includes income foregone while training; however, government benefits that encourage young people to remain in education are an incentive that raises demand for VET. It is argued that the level of government subsidisation has a major impact on the price of VET to individuals, enterprises, industries, communities and regions. The factors which shape tastes and preferences for VET are of major interest in a discussion about the demand for VET.

Accordingly, this publication takes demand for VET to mean intended and desired participation in VET programs. The price of VET is considered where

relevant, in the context of the other factors which shape demand for VET. Individuals, enterprises, industries, communities, regions and the nation all have different reasons for wanting to participate in VET, or, in the case of communities, regions and State training authorities, for wanting individuals or enterprises to participate. These groups are all stakeholders in VET.

short and long-term motivations for demand

Compared to enterprises and industries, individuals, communities, regions and nations have a greater interest in investment in VET for long-term returns. Individuals' demand for VET is usually part of long-term planning to meet career and life goals (CEET 1998). A community or region also tends to take a long-term view, and wants training to attract and retain enterprises and ensure its population can compete in the rapidly changing knowledge-orientated economy (CRLRA 2000).

Individuals, communities, regions and the nation have an interest in general skills that facilitate transfer between jobs and allow people to be flexible. Individuals seeking employment must prepare a portfolio of skills and knowledge to fit a succession of jobs rather than just one (Doyle, Kerr & Kurth 1999). A large longitudinal study of VET students has found students also look to develop skills for reasons unrelated to direct labour market outcomes, including participation in family and community life (Golding & Volkoff 1998b). National studies across a number of industries find that enterprises need suitably trained employees to perform jobs now, and prefer training in job-specific skills (for example, Kilpatrick & Crowley 1999). Industries, too, have an interest in a supply of skilled workers who can meet current industry needs.

In the labour market, TAFE qualifications are perceived to be second-rate by comparison with more expensive university qualifications according to a large survey of people from all sections of the Australian community (Dickie 1999). TAFE is still seen to be about trades and 'dirty work' rather than 'the smart new world'. A report by Schofield and Associates (1999a) on Queensland's apprenticeship system finds that people still make a distinction between vocational learning (learning skills for a working life) and vocational training, which is seen as occupation-specific.

economic drivers of demand

In an overview of papers presented at a conference on vocational education and training, Ferrier and Anderson (1998, p.1) observe that the current VET system emphasises demand to achieve economic goals rather than social goals. There have been a number of studies devoted to demonstrating the positive effects of VET on

employment and income levels. International empirical macro-economic studies of the effects of education and training are reviewed by Blundell et al. (1999) who conclude that education brings positive economic returns to individuals. Norris (1996, pp.76–8), using Australian income data, shows that incomes generally increase with educational qualifications, even taking into account income foregone while studying. However, the same data show that returns to VET qualifications (measured by income earned over a working life in excess of that earned by a person with only school leaving qualifications) are low or even negative for some qualifications (Norris, Dockery & Stromback 1997, pp.8–12). Participation in skills development is directly linked to the level of job security and incomes received by employees (Mansfield 1998). Undertaking education and training is a way for people to signal their abilities to potential employers. Ball and Robinson (1998) suggest that perceived lifetime earnings of an occupation are an important factor affecting career choice, and therefore associated demand for education and training.

The results from studies seeking to find links between education and training and returns to enterprises (for example, Kilpatrick & Crowley 1999; Billett & Cooper 1997; Catts et al. 1996) and nations (for example, Maglen et al. 1994) are mixed. The lack of a clear indication of the presence of returns to education and training is thought to be due to the difficulty of separating the impact of education and training from the many other variables influencing performance. There is general agreement that there are economic returns to enterprises and nations from education and training. This agreement is reflected in policy that encourages investment in education and training, particularly VET (DEET 1995).

social drivers of demand

Despite the large body of literature heavily focussed on VET and its relation to the world of work, research, including Golding and Volkoff's large longitudinal study of VET participants and Dickie's survey of people from across the community, has found that there is a wide range of non-economic factors associated with common social goals that lead to participation in VET (Golding & Volkoff 1998a; Dickie 1999). These include community development, self-esteem, personal fulfilment, creative development, parenting and fun (Dickie 1999). However, VET undertaken for these reasons is often not highly valued because 'we have excelled at linking education and training to the world of work—sadly we've done it so well that unless it's related to work, education almost has no value at all' (Dickie 1999, p.19).

The reports on the traineeship and apprenticeship systems of three States by Schofield and Associates (1999a, 1999b, 2000) reflect a deep concern for the work-

oriented direction of vocational education and training policy. Not all individuals are able to participate in the labour market (for example, people with disabilities, prisoners, and home makers). For these people the important thing is life skills and coping independently (Schofield & Associates 1999a). Not only do people need basic skills for their own personal fulfilment, but enterprises look for generic or basic skills and attitudes, rather than specific skills and experience, especially when hiring young people. Several studies note that these 'soft' skills include interactive and personal skills and self-confidence (Schofield & Associates 1999a; Figgis 1998; CRLRA 1999; Drummond 1999; Ball 1999). Further research is needed to develop measures of the relative contribution of economic and social factors to the demand for various VET products.

predicting demand

Government predictions are based on quantitative modelling using Australian Bureau of Statistics data, and a range of assumptions about likely participation rates and industry product demand. These predictions suggest that the workforce will become more skilled in line with an increasing demand for skilled workers and there will not be large imbalances between the supply and demand for skilled workers in the period to 2005 (DEET 1995).

Industry and enterprises use VET to match skills with known and emerging mixes of technology and work organisation. Knowledge about directions in research, technology, investment plans, product development and industrial relations are needed before predictions of training demand can be made. Predicting demand is further complicated by the fact that societal needs for vocational education and training may not coincide with the skill needs of enterprises and industry, instead being related to dealing with the social problems that come from unemployment (CEET 1998).

There has been very little recent work on quantitative predications of demand for VET in Australia. An exception is a prediction of labour market training needs in Victoria undertaken by Shah, Burke and McKenzie (2000). The model used makes assumptions about employment projections, participation rates and levels of privately funded training to estimate the number of publicly funded student contact hours of industry-specific training needed to bring the Victorian workforce to a certain skill level. It can make predications on an industry and regional basis, under a variety of training participation rates and other scenarios. Predictions generated by the model are discussed later in this review.

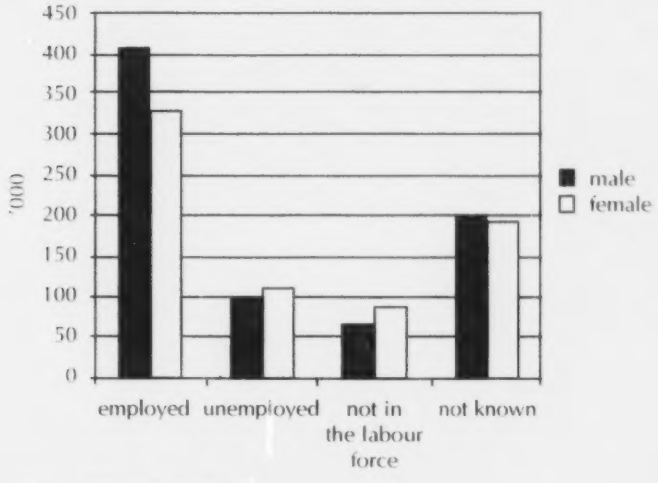
Demand for VET will change over time due to the changing nature of the labour market, the changing preferences and relative power of different client groups of VET, the cost of training, and the information available to clients about training and alternatives, pathways and forecasts of skills needs (CEET 1998). As well, policy changes have a significant impact on the demand for VET.

extent of **met demand** for VET

The extent of existing participation in VET shows the level of demand currently being met by the VET system. The extent of participation in various programs depends on clients' needs and capacity to pay (demand), the programs available and their price (supply) and the match between demand and supply. Dickie and Stewart Weeks (1999) note that the overwhelming majority of Australians believe learning to be important and valuable, but there is not the same level of enthusiasm for the products and experiences of the formal education and training system. This suggests there is unmet demand for particular kinds of VET products that are not readily available.

The number of clients in VET programs increased by 65% in the ten years from 1989 to 1998 to 1.54 million, or 12% of Australia's working age population (NCVER 1999). Almost half of the clients of VET are aged 30 or more (48.6%), including 52.4% of female clients (NCVER 1999). Most clients of VET are already employed, with females more likely than males to be unemployed or not in the labour force (see figure 1).

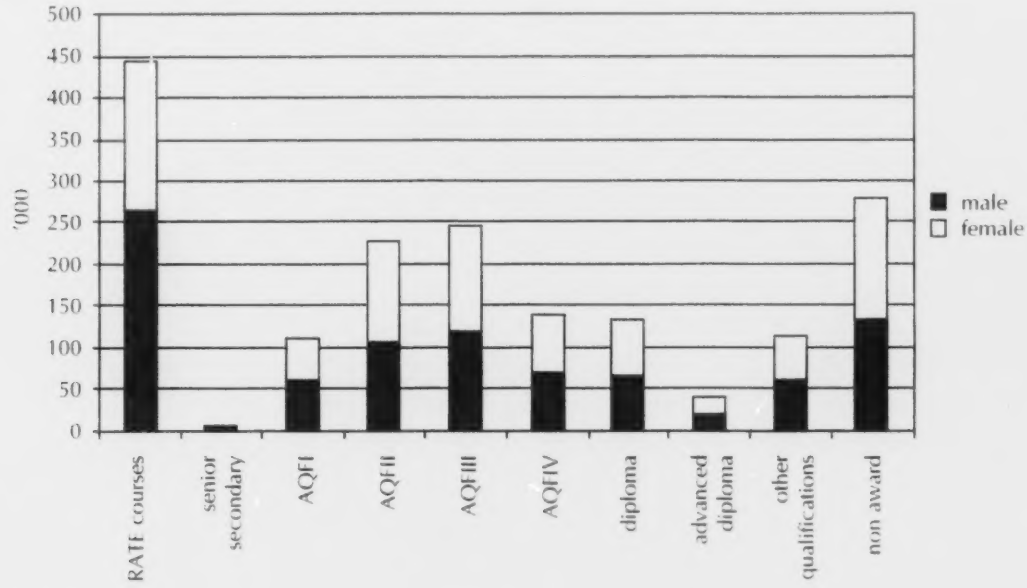
Figure 1: Employment status of VET clients



Source: NCVER 1999 (1998 data)

Non-award courses are popular. Of those studying courses aligned to the Australian Qualifications Framework, the largest group are enrolled in certificate II or III courses (see figure 2).

Figure 2: VET client course enrolments by qualification streams 2100–4500



Source: NCVER 1999 (1998 data)

Most of the current demand for VET is met by TAFE and other government providers (75% of clients in 1998), with 15.2% of clients undertaking training with community providers and 9.8% with other registered providers. Women are more likely than men to be enrolled with community providers. TAFE and other government providers deliver a greater proportion of longer courses; although 25% of clients are enrolled outside the TAFE and government system, only 14% of hours of delivery were by community providers and other registered providers (NCVER 1999).

influence of policy on demand for VET

The national VET strategy (ANTA 1998) is a policy response to globalisation, youth unemployment and the need for a flexible, adaptable and skilled workforce. The Australian Recognition Framework is a competency-based system built around the demands of industry. The collective needs of industry receive primary consideration in national policy through the central role of industry training advisory bodies

(ITABs), although usually it is the enterprise rather than the industry as a whole who 'demands' training. As well, VET policy must consider how to provide people with opportunities to optimise their potential to contribute socially and economically, independently of any job they may currently hold.

Government policy influences the supply of VET as well as demand. A shift away from TAFE and other government providers is attributable partly to the policy of user choice, with 86.3% of vocational education clients in 1996 but only 75% in 1998 enrolled with public providers (NCVER 1997, 1999). Under this policy, public funds flow to the training provider chosen by the enterprise and/or individual. The policy encourages flexibility, requires providers to market their training 'products' and allows enterprises and individuals the choice of registered training organisation (RTO) and location (KPMG 1999).

Criticisms of VET policy centre around the ability of clients of the system to articulate their demand and negotiate to ensure that it is met, the quality of training and its outcomes, and the emphasis of policy on the needs of industry.

Billett et al. (1997) in a large multi-method study of VET for the Victorian Office of Technical and Further Education, express concern that policy places responsibility for decision-making about training provision on clients, although there is a dearth of empirical evidence about the quality of decision-making by enterprises and students. User choice assumes firstly that clients (individuals, enterprises and community groups) know and are able to articulate their training needs; that is, express their demand in a way that providers can hear and understand. Secondly, user choice assumes that clients are able to choose between competing providers and, finally, that there is a choice available. Training brokers who mediate between clients and providers have been identified as a way of establishing needs and improving the match between client demand and provision in a series of case studies of brokers, their clients and providers (Kilpatrick & Bound 1999).

Smith (1999) in an evaluation of the user choice policy, questions the quality of training and outcomes of training under user choice in Queensland, particularly where training is undertaken exclusively on the job. Deregulation of the training system and user choice need to be closely monitored to ensure that the quality of the training and its outcomes are not lost (Broadbent 1998; Hewitt 1999).

Kinsman (1998) asserts that some sectoral goals have been neglected and others emphasised, which has favoured the demands of some stakeholders to the detriment of others. The mission statement and objectives given by ANTA (1998) focus largely on VET and the world of work and neglect the notions of quality of life

and improvement of knowledge that appeared in earlier policy documents (see ANTA 1995).

Policy decisions and national and State funding bodies can influence the demand for VET by endorsing appropriate training packages, providing subsidies and student support, and giving guidelines on the pricing of publicly funded VET courses (CEET 1998).

Policies other than the national VET strategy impact on the demand for education and training. These policies come from a variety of government departments at State and Commonwealth level. For any one industry there may be a number of policies from a range of State or Commonwealth agencies which may be conflicting. For example, the national agricultural policy ('Agriculture—Advancing Australia') includes policies on farmer education and training, and State and Commonwealth policies for small business include an educational component (Kilpatrick et al. 1999; Kilpatrick & Crowley 1999). Education and training policy must also take account of the wider 'web' of policies in such areas as social security, and industrial relations in order to meet the national goals for VET effectively.

There are concerns that recent reform in VET has occurred with 'incredible swiftness', limiting the opportunities of those actually within the VET training industry to participate in the current policy debates (Broadbent 1998). Constant, rapid changes may be impacting on the quality of training and contribute to a lack of awareness of opportunities for VET clients and therefore suppress demand. For example, KPMG (1998), in a national evaluation of user choice, found that clients were not well informed about the aspects of training where they could exercise choice. A major report on the role of VET in regional Australia by CRLRA (2000) found little awareness of training packages and identified lack of continuity of funding and programs as the single biggest barrier to enhancing participation in VET and to achieving beneficial social and economic outcomes.

structure of this report

This publication is structured according to demand for VET by the various stakeholder groups identified at the start of this chapter. The next two chapters examine the demand for VET by individuals; firstly demand by those individuals still at school and just entering the workforce, while the following chapter considers demand for VET by older individuals, including demand from those in equity groups. Subsequent chapters examine demand issues relating to enterprises and industries and finally in the second to last, communities, regions and the nation as a whole. All

but one of these chapters includes discussion of price/cost and policy issues, as well as issues specific to the group that is the subject of the chapter. The last chapter presents areas identified for further research and gaps between existing research findings and policy and practice.

demand by **school students** and **their families**

introduction

This chapter looks at the demand for vocational education and training by secondary school students in light of the growing importance of continuing education in the post compulsory school years. The following chapter considers demand by other groups of individuals. The appropriateness of existing VET programs and their ability to address demand for lifelong, 'general' education by young people, their families and employers is debated in some of the literature reviewed. The extent of existing participation is described and the changes in the labour market which will lead to changes in demand for VET provision are outlined to provide a context for the research reviewed. Research on demand for VET programs in schools and price and cost issues are discussed. Factors such as availability of advice and information and the influence of parents and careers advisors are discussed with regard to demand for VET during and after secondary schooling. The implications of the issues found in the research literature reviewed for VET policy conclude the chapter.

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Secondary school students are a source of current and future demand for vocational education and training, either immediately in VET-in-Schools (or school–industry) programs, as part-time workers or when they finish secondary school. Policies aimed at increasing higher education participation and secondary retention rates have only had a limited capacity to deal with youth unemployment

levels, which has led to a shift towards vocational education and training for young people (Keating 1998). Increasingly, schools are being urged to prepare students for the labour market as well as for lifelong learning, and VET-in-Schools programs are part of the answer to these demands. Longitudinal studies show that those who do not progress from secondary school into further education and training and/or employment are severely disadvantaged and at risk of social marginalisation (Smith 1994; Ainley & McKenzie 1999). Evidence from large-scale longitudinal studies suggests that students who study VET at school are slightly more likely than other students to proceed to further VET programs post-school, but less likely to continue in formal education (Misko 1999; Ball & Lamb 1999).

Advice from school counsellors on post-compulsory education which influences students' choice, and so demand for VET, is often heavily skewed towards higher education and full-time study, with university entrance projected as the most desirable outcome of secondary schooling, and TAFE being 'second best' (Smith 1994; Dickie 1999). Some students actually put off the thought of employment and make few career plans, especially if they think they are assured of a place in university (Vick 1994). Little information on TAFE or other VET courses has been made available to students contemplating options other than higher education. With more students participating in VET-in-Schools programs which require work placements, advice and information needs to be provided so that links may be developed between vocational preparation, career planning and job placement (Dusseldorp Skills Forum 1996). Students need to know that 'it's perfectly OK to ... get an apprenticeship without being looked down on and treated as a less intelligent individual by both teachers and society' (Smith 1994, p.30).

There has been much debate over the role of VET-in-Schools programs. There is a need to cater for the interests of students who are not destined for university, and to develop their notion of personal value, but argument continues as to whether specific training or general education is the answer. There have been complaints that VET in schools is focussing heavily on 'training' and neglecting 'education' (Schofield & Associates 1999a; Kinsman 1998). A broader educational focus, it is argued, would develop technical and conceptual skills and a grounding in citizenship skills which would foster independence rather than dependence on already existing but limited areas of work (Schofield & Associates 1999a). There are perceptions that industry-specific training is too narrow, especially in light of the consideration that much of what people train for now will not be relevant in five years time. Despite concerns about the specific nature of vocational training in schools, there is evidence that generic competencies, such as numeracy, problem-

solving and communication skills, are best learnt through focus on specific competencies (Sweet 1996; Figgis 1998; CRLRA 2000).

In light of this debate, further research is needed into the desirable balance between demand for general and job-specific education and training for young people, especially the role of context in learning generic skills and in the transfer of skills between school and work and between jobs.

Parents, employers, industry and students recognise a need to learn for life, which requires literacy, numeracy, personal skills and positive attitudes; skills which are translatable into non-work situations (Clutterbuck 1996; Schofield & Associates 1999a). Students understand that they may not move straight from school to work, and will probably need more than a secondary education (Vick 1994). VET providers and policy-makers should consider life skills as a legitimate area of demand for VET.

extent of **participation** in VET

About a quarter of the national 1996 Year 11 and 12 cohort and a third of the 1996 Year 10 cohort enrolled in TAFE in 1997 (Misko 1999). Males most frequently enrolled in engineering and surveying, while females most frequently enrolled in business administration, hospitality and transportation. Apprenticeships have been the traditional pathway for school leavers accessing vocational education and training, but a number of 15–19-year-olds are now opting for alternative vocational pathways, especially traineeships (Ball & Robinson 1998).

Since the introduction of VET-in-Schools programs, the number of Australian schools providing some type of program has grown. In 1999 almost 90% of Australian schools offering Year 11 and 12 and 129 000 students were participating in VET-in-Schools programs (Scollay 1999a). The nature of VET programs varies between States from school–industry programs that are largely based in schools but have a work placement component, to programs where students spend several days a week in the workplace. In some cases school-based apprenticeships are offered where students sign training agreements. Nearly 1500 school students had signed training agreements as part-time New Apprentices at the end of 1998 and projections were that demand would treble by the end of 1999 (Scollay 1999b).

labour market changes

Students completing compulsory schooling are entering a world in which there is no longer the security of a 'job for life'. Instead there is increasing casualisation,

contract and part-time work, and rapid technology changes. Enterprises, small business in particular, are looking for people who already have some of the specific skills they need rather than having to invest in initial training (KPMG 1998; CRLRA 1999). School leavers who are looking for paraprofessional qualifications represent one of the fastest-growing segments of the VET training market (Kinsman 1998). The pace at which the nature of work is changing means that without constant involvement and training, individuals are likely to be severely disadvantaged. This suggests that demand for VET will be increased and ongoing over the lifetime of today's school students.

A work/study 'mosaic' is becoming more commonplace among students young and old, as students need to support themselves financially while studying, as well as needing to demonstrate to future employers that they have both qualifications and established employment experience (Abbott-Chapman 1999; Dwyer et al. 1999). Students are the largest group of employed teenagers (Wooden 1998b). Despite a heavy workplace commitment, most students do not see relevant connections between their work occupation and their study, and do not receive recognition of their workplace learning in course arrangements and credits. It seems that students and VET providers do not explore the combination of work and study as an opportunity to further industry partnerships with local employers (Dwyer et al. 1999). As there is no longer a clear-cut transition between study and work, Dwyer et al. (1999) recommend developing a model of study which is combined with work, for use in planning and policy-making. Changes to the pattern of work, study and typical career pathways have led to an emphasis on 'seamless education' where students can move freely between, and within, vocational education and training, secondary schooling, work and university with their skills and experiences from each recognised as valid (Teese 1997; ANTA 1998).

VET in schools

Students in school–industry and VET-in-Schools programs spend structured time in the workplace that is assessed and recognised toward a VET qualification in many cases. They perceive these programs to be strengthening their job skills, improving employment chances, and facilitating entry to TAFE (Teese 1997). Participation in VET-in-Schools programs varies according to gender, socio-economic background, rural or urban location, school type and language spoken at home. Students from unskilled and skilled family backgrounds are more likely to be involved in programs than those from professional/managerial or clerical family backgrounds. Slightly

more boys than girls participate in VET-in-Schools programs. Government schools have a greater percentage of students participating in VET-in-Schools programs, followed by Catholic schools (Kilpatrick & Guenther 2000; Misko 1999).

Demand for VET-in-Schools programs is inhibited by problems of credit transfer into and from VET awards according to a Victorian study of those entering TAFE (Teese 1997). As well, many parents are not aware that their school offers VET programs, or even the nature of such programs. In rural schools, VET makes an important contribution to meeting diverse student needs (Country Education Project 2001). Those students counselled to enter VET programs tend to be the less academically inclined (Kilpatrick & Guenther 2000; Misko 1999). Misko (1999) recommends programs taking place outside the school environment so students may have a 'fresh start'. However, Kilpatrick, Bell and Kilpatrick (2000) point to the important role that Tasmanian rural VET-in-Schools programs have in easing the transition from school to work or further study for those students who are less confident.

Schools could do more to make employers aware of the job-specific skills taught in VET programs and the relationship between school-based training and efficiency gains (Figgis 1998; Misko 1998; CRLRA 1999). This would increase the interest, demand and participation of enterprises in these programs, and allow the program to expand to meet increasing demand from students. Of those enterprises who are aware of or participate in VET-in-Schools programs, nearly all are looking for and want to develop generic skills in 'their' students. These skills include a willingness to listen and to learn, the ability to communicate and to take initiative, a preparedness to accept the rigours of the workplace and ability to work in teams (CRLRA 1999; Figgis 1998; Helms & Nelson 1997). A large number of participating enterprises have requested better communication and a more formal approach which details accountability and responsibilities (Helms & Nelson 1997).

price and **cost** issues

Misko (1999) suggests that young people's educational choices are more strongly based on immediate cost considerations than lifetime earnings. Over half of respondents in a study by Smith (1994) indicated that they would not go on to study higher education if asked to pay up-front fees. This suggests that demand for VET by young people would fall if the price to the student was increased, especially if the price had to be paid up-front. Government funding for young people to remain in education has an impact on demand for VET. In a Tasmanian study of VET in rural

schools, the requirement for young people to be in education or training or undertaking voluntary work in order to qualify for the Common Youth Allowance is cited as a factor in prompting young people to enrol in VET programs (Kilpatrick, Bell & Kilpatrick 2000).

Gregory (1995) examines participation in education, not only VET, and starting salaries for various qualification levels over 20 years. He concludes that increased teenage school retention has not been the result of demand for education based on higher future economic returns (that is, future income less the cost of education), but rather caused by lack of demand by employers for young workers. Increased government expenditure on post-compulsory education and insufficient job growth combined with a lack of demand by enterprises for young people of all education levels has had an impact on participation in education and training (Misko 1999; Wooden 1998b). It should be noted that the costs of participation in education and training by school students and school leavers are often borne by the family as well as or instead of by the student. Family influences on demand, discussed in the next section, are therefore especially important for this group. Price and cost issues that affect demand for VET by all groups including school students are considered further later in this report.

family, school and other **influences**

Secondary school students and their families are very much dependent on the assistance of schools for information and advice about further studies and the world of work (Kilpatrick & Guenther 2000; Marsh & Williamson 1999; Misko, Campbell & Saunders 1998). Positive, practical and encouraging attitudes from staff can be more important than financial and material situation alone in influencing a student to go on to further study (Abbott-Chapman 1994). Advice and impressions that students receive from families, teachers and other advisers play a large part in the decisions they make. Despite this, families have been 'relatively under-targetted' in careers advice and information (Smith 1994). It is possible that a lack of information for parents about VET and VET-in-Schools programs is influencing participation of students. A study by Misko, Campbell and Saunders (1998) found that the proportion of parents of non-participating students who did not receive information was almost double that of parents of participating students. In order to develop better informed demand for VET by school students and their families, materials and approaches specifically for the parents of young people need to be considered by careers educators. As well, young women are not receiving enough information about non-traditional careers (Drummond 1999; Connole 1997).

Students' decisions to participate in particular courses of study are also influenced by the nature of their social life, by their commitment to goals such as desired employment, self-esteem and their academic achievement (Hemmings et al. 1994). Students may choose a course of study simply because they know they can easily achieve success—for its 'credentialist value' (Vick 1994).

Many young people recognise that education is becoming more of a prerequisite to employment, and study for this reason (Smith 1994; Doyle, Kurr & Kurth 1999; Dwyer et al. 1999). Some young people would be unlikely to apply for further education if they were easily able to find satisfying employment (Smith 1994).

issues for VET

There are many studies and reports looking at the effect of not completing higher secondary schooling on earnings and employment, but few venture to discuss why completion of Year 12 makes such a difference, or what precisely high school drop-outs are missing. It is obvious that the secondary system of education is not 'working' for them. It is worth considering whether there is an unmet and unarticulated demand for a different type of education and training. Whether this is something that should be addressed by the secondary schooling system or by the VET system is open to question and requires further research. The participation of some adults in VET programs in rural Tasmanian schools suggests there are a number of people who have not had access to suitable school-based education and training opportunities in the past (Kilpatrick, Bell & Kilpatrick 2000).

VET needs to address the specific problems of low academic achievers. Students with low levels of literacy and numeracy going on to apprenticeships and in particular, traineeships, often fail to complete their programs (Smith 1998). This indicates a need for better support and clearer and more relevant information and advice in schools careers programs for students with low academic achievement (Marsh & Williamson 1999; DETIR 1999). The number of people entering training for which they are unsuited or unable to complete might then be reduced. There is evidence emerging that VET provided by TAFE and schools is more effective in providing support in literacy and numeracy and personal development (Kilpatrick, Bell & Kilpatrick 2000; Smith 1999).

policy implications

VET policy needs to consider better marketing and promotion for secondary school students and their families. It is clear from the literature reviewed that there is insufficient appropriate information currently readily accessible to students about pathways and options through VET. Demand for VET would be increased by promoting vocational education and training as a legitimate and relevant alternative to higher education.

Both providers and policy-makers need to recognise the demand for learning life skills which is expressed by parents, students and employers. VET programs should incorporate topics beyond job-related skills, topics which will better equip young people for non-work aspects of their lives such as organisational skills and money management.

A system which recognises the need for people, youth especially, to be 'mobile' is of great importance, as a linear sequential model of a transition from study to work is no longer relevant (Dwyer et al. 1999). Policy needs to recognise that the traditional notion of linear pathways from school, through VET or higher education to work, no longer applies. Demand is for a VET system that has flexible entry and exit points.

The rising importance of literacy and numeracy skills for work, and the narrowed options of those who do not complete secondary schooling (which leads to further disadvantage and problems in accessing and successfully completing other training) is an area policy-makers need to consider. It is reasonable to expect that literacy and numeracy support will be an area of future demand for VET. Another policy suggestion by Ainley and McKenzie (1999) is to give young people, especially early school leavers with low academic achievement, an education and training entitlement in order to purchase approved education and training programs from appropriate providers. This would open up learning opportunities and serve important equity and efficiency goals.

demand by **individuals**

introduction

This chapter continues consideration of demand by individuals, the most diverse group of vocational education and training stakeholders, with perhaps the most diverse learning needs and reasons for demanding VET. The social and economic benefits from training as well as motivations for individuals are outlined in order to better understand why various groups might demand VET. The modes of training desired by both employer-sponsored and non-sponsored individuals are considered next, because the demand for VET is complex and varies not only by client group and by type and level of qualification, but also by delivery mode. The tensions between the long-term training demands of individuals and the short-term and immediate needs of employers in relation to the quality of the training received and the pathways available is discussed, followed by price and cost issues that impact on individuals' demand for VET. Motivations and other factors which either limit or contribute to demand by those belonging to specific demographic groups are then summarised group by group. A discussion of the capacity of current VET policy to address the demands and needs of individuals in the system concludes the chapter.

Skills development over time not only secures individuals' personal goals, but also assists to secure the goals of the nation and enterprises in which the individual may work.

Demand for VET is a derived demand; it stems from a perception of the benefits that follow from VET. There are a number of advantages to individuals who undertake VET, both in the initial years of employment, and later as part of their lifelong learning (Ball & Robinson 1998). Skills development over time not only secures individuals' personal goals, but also assists to secure the goals of the nation and enterprises in which the individual may work (Billett et al. 1997). Some of the economic benefits to individuals include higher wages and salaries, higher savings

levels, improved working conditions and personal and professional mobility (Mansfield 1998). Social benefits include improved quality of life, better consumer decision-making, increased personal status and more involvement in leisure activities (Education Department Tasmania 1998; Falk & Kilpatrick 1999). Individuals' decisions about training are based on a longer-term plan than that of their enterprises, industry or other agencies (Golding & Volkoff 1998b).

Past demand for VET from those already in the workforce is significant, with 47% of the Australian workforce having a post-school qualification, including 22% of the workforce with a skilled or basic vocational qualification and 16% with a bachelor's degree of higher (derived from ABS 1998, p.40), and many others participating in VET without the intention of achieving a qualification (Ball 1999). The largest group of clients in formal VET institutions comprises individuals who are not sponsored by enterprises. Non-sponsored individuals are typically looking for a mix of skills which will enhance mobility and open up a variety of options (Kinsman 1998). The rapidity of economic and technological change makes it difficult to assess the long-term training demands of these individuals, other than to say that such demand is likely to increase.

Teese (1997) notes that defined segments of formal education are becoming more inappropriate for a number of individuals. Due to career mobility, industry restructuring, evolving performance demands in employment, and quality of life issues, individuals need a 'seamless' VET system which allows for multiple entry and exit points and the establishment of a lifelong learning pattern.

tensions between demand by **individuals** and demand by **enterprises**

Enterprises tend to demand VET that will meet enterprise-specific, immediate needs. In contrast individuals, regions and the nation prefer VET which is useful in a variety of contexts over a longer time period. Individuals, regions and the nation expect long-term, lifelong learning outcomes from VET. There are tensions when these long-term goals are meshed with the more immediate expectations of VET from enterprises. Some enterprise-sponsored individuals have found that their program of training has been limited to the specific interests of the enterprise, which may lead to outcomes which deny transfer and inhibit portability (Billett & Hayes 1998). The 'flexible delivery' negotiated by their enterprises has meant complex schedules of attendance at multiple locations and fixed times not always in the best interests of learning for those individuals (Billett & Hayes 1998; Connole 1997).

Training which includes a large component on the job can diminish access to facilities—especially libraries and other information literacy resources—at both public and private providers according to a qualitative study of women VET students in New South Wales (Connole 1997). However, a set of case studies of TAFE and workplace-based training in three industries found very little difference in trainee satisfaction between the TAFE and workplace-based students (Symmonds et al. 1999, p.71).

A number of studies report a growing dissatisfaction by individuals with the specific and work-oriented nature of vocational training. Many individuals, especially those with disabilities, or suffering inequalities in returning to the workplace, feel that general learning and personal development are more important (CEET 1998). Not only do enterprises state that they want to recruit people with general skills (CRLRA 1999; Figgis 1998) but these skills are necessary for further education and training in general, as well as a more positive social environment (Marsh & Williamson 1999; Education Department Tasmania 1998).

Development of a national system, the fostering of an industry-led client focus and the development of a training market have taken precedence over goals relating to equity and lifelong learning in policy (Kinsman 1998). It seems that the annual VET profiles give exclusive weight to ITABs, and the development of a national system has led to homogeneity, and a central and managerialist approach to education and training. While ITABs and the national VET system are important, the reporting ignores the majority of individuals who are not part of that group who are already employed and engaged in learning through the VET system (Dickie & Stewart Weeks 1999). This tends to 'hide' the demand for VET by current non-participants.

One outcome of the industry focus is that apprentices and trainees frequently do not exercise choice under the user choice policy. Often, negotiations between enterprises and training providers have already occurred before apprentices and trainees are appointed, and enterprises believe that they (employers) are in the best position to make decisions about training provision (KPMG 1998, 1999). User choice policy which has been developed for the benefit of enterprises privileges large, advantaged businesses who are in a better position to make market choices. Clients with the most complex, multiple disadvantage backgrounds are the most disadvantaged in terms of access and choice (Golding & Volkoff 1998b). Poor vocational outcomes may result from VET because of lack of customisation of training for these clients. Public provision of VET plays an important role in satisfying the demand of individuals not sponsored by employers.

price and **cost** issues

The majority of research on price and cost issues for individuals participating in education and training considers returns to investment in education and training over a working life; that is, future additional earnings attributable to training less income foregone while training and direct costs of training. While there are positive returns to individuals from university degrees, rates of return from apprenticeships vary. Returns are higher for males, and highest for cooks and metal fitters and machinists, but can be negative for females in some trades (Norris, Dockery & Stromback 1997, pp.8–12). As mentioned in the previous chapter, Gregory (1995) considers changes in starting salaries for graduates, expected lifetime earnings and participation in post-compulsory education. He concludes that demand for education and training is based more strongly on the cost of an extra year of education than on expected future earnings. The cost has been falling as a combination of work and study reduces income foregone while participating in education and training and as government benefits encourage young people to stay in education or training. This suggests that the price of VET itself influences demand less than the availability of income while training. Income could be government benefits, a training wage or wages from other part-time work. There is no research that overviews the sources of financial support for living costs of VET students.

Many non-enterprise-sponsored individuals have no real choice of provider or ability to influence content and aspects of delivery because of their inability to pay. The price of VET is an issue for this group; they are unable to meet their demand for any VET other than publicly provided VET. Incentives to train are diminished for those in low-paid jobs or who are unemployed (CEET 1998). Those in low-paid jobs have to work longer hours to earn a sufficient income, and the time investment required for training is a disincentive.

Chapman (1998) mounts an argument for TAFE institutions to move from the current up-front fee policy to a higher education contribution scheme style of funding individuals' contributions to their education and training costs. He argues that up-front fees disadvantage those least able to pay in light of the unwillingness of financial markets to lend for investment in education and training. Hence, financing VET out of income earned after gaining qualifications is more equitable and efficient (pp.41–3). However, there is no comprehensive study of the extent to which people are prevented from enrolling in TAFE, or VET more generally, by up-front fees. This should be investigated further along with any proposed changes to funding the contribution which individuals make toward the cost of their own VET.

The allocation of costs of training between individuals who are employees and their employers is discussed in the following chapter.

motivations and **intentions** of individuals

The changing nature of work with growing casualisation and the proliferation of short-term contracts means that individuals increasingly must support their own training. At the same time, the need to train for future, better work is increasing (Owen & Bound forthcoming). The majority of non-sponsored individuals attending VET institutions do so in their own time. They can be training to gain a second (or subsequent) qualification, to upgrade basic learning and work skills, or are seeking a change of employment through their training (Kinsman 1998). New technologies and quality assurance motivate many individuals to train (CEET 1998).

The longitudinal study by Golding and Volkoff (1998b) identified several reasons, often overlapping, that motivate individuals to participate in vocational education and training. Many individuals report both economic and social motivations for participating in VET. Labour market motivations identified are: to get a job; to gain necessary or extra skills for the present job; to get a better job; to move into a new career; and for promotion or higher pay. Labour market uncertainty and job security impact on economic motivations, and credentials are therefore important for people who train for economic reasons (Connole 1997). Social motivations include wanting to improve personal capacity to contribute to family and community, or for educational reasons beyond skill and employment outcomes. Others participate in VET because of an external requirement such as quality assurance or licensing, which may or may not be job-related.

Sex, age, birthplace and language background, family status, previous education experiences, hours of work, employment status, tenure, experience, union memberships, location of training, industry and sector affect individuals' participation in and access to VET (Baker & Wooden 1995). The encouragement of family members is an under-recognised factor in promoting the demand for VET, while fear of failure, technology and looking foolish are factors that suppress individuals' demand (Dickie & Stewart Weeks 1999). Sensitivity to these factors when designing programs should increase demand.

Many people in the VET system, including those who are self-employed, never aim to complete a qualification, but are looking for specific skills they can obtain from a set of modules (Ball 1999; Kilpatrick, Ball & Kilpatrick 1999). In some cases one course will be chosen over another because of shorter duration, easier entry

requirements, or the perceived reputation or quality of the course, rather than to meet a demand for skills in the labour market (Connole 1997). University graduates tend to study a VET module or a mix of modules rather than undertake a qualification, often to acquire practical skills not provided in a higher education course, or to meet the requirements of a particular government regulation (Ball 1999; Teese 1997).

Past participation in post-secondary education is a good predictor of future participation in VET (Dickie & Stewart Weeks 1999; Golding & Volkoff 1998a). Increasingly, university graduates are seeking a second or subsequent qualification or skills set from VET (Kinsman 1998). Often current and prior fields of study are 'far from parallel', which promotes a positive skills mobility. Those for whom current work and study fields match are considerably advantaged in terms of labour market outcomes, although these are in a minority (Golding & Volkoff 1998a).

issues affecting demand by **individuals** in various **client groups**

Demographic groups singled out by policy-makers and researchers as suffering disadvantage include women, people from non-English-speaking backgrounds, Indigenous people, those with disabilities, rural and isolated residents, youth, the long-term unemployed and those with low skills (literacy and numeracy). The first five are ANTA's targetted equity groups (ANTA 1998); however, those in any of the listed groups may suffer disadvantage in accessing appropriate VET, particularly if they are members of more than one group (Golding & Volkoff 1998b).

VET clients belonging to the ANTA target equity groups make up two-thirds of VET clients (Connole 1997). Many of these have multiple and complex disadvantages. There are a number of common issues and problems with the current VET system that affect all of these groups. The prevailing models of learning and associated training materials that privilege a male, Western perspective and assume a high level of literacy and numeracy, are unsuitable for the learning needs of these clients according to studies of Indigenous, female, disadvantaged and older client groups (Arnott 1997; Connole 1997; Golding & Volkoff 1998b; Millar & Falk 2000). The initial planning and development stages of courses and modules often fail to overtly include equity groups as principal clients of VET, resulting in a sub-optimal delivery of information and outcomes (Golding & Volkoff 1998b). Customised courses for various groups, training to make staff aware of the issues that face these clients, ongoing encouragement and support, flexible timetabling and delivery, and

encouragement for teachers who identify with these groups are all measures that would help meet the VET demand of the large equity sections of VET's client base. Other forms of support outside the VET system are sometimes needed by individuals to ensure their participation in, and completion of VET courses. For example, studies of equity groups find that individuals need affordable, stable housing, transport and a living income in order to access VET and complete courses (Drummond 1999; Connole 1997).

New technology and the increasing knowledge-intensity of work have displaced low-skilled jobs, leading to difficulties for those with low literacy and other disadvantages in gaining work (CEET 1998). The sheer pace of change—much of it driven by policy-makers—means that those who seek to be competitive and informed must constantly be training and re-training, perhaps without 'getting anywhere' (Doyle, Kerr & Kurth 1999).

Demand for VET by those from rural and isolated areas is considered later in this report. Issues relating to demand by women, people from non-English-speaking backgrounds, Indigenous people, people with disabilities, youth, the unemployed and older people are discussed in the following sections. Demand issues relevant to people with low literacy and numeracy skills are not considered separately, since many of those in the groups discussed below have low levels of literacy and numeracy.

women

Connole (1997) points out that women specifically need information about entry points and pathways, so that the completion of higher level qualifications can be broken into stages if need be. This also applies to many individuals belonging to other equity groups. McIntyre and Kimberley (1998) found that clear pathways between adult and community education (ACE) and VET increase demand for VET, especially by women who are the main clients of ACE. Currently, the quality of information provided on courses, delivery, costs, locations and times of training is unsatisfactory. More information in non-traditional areas is essential. Many women report feeling that their eyes are not opened to the opportunities available in non-traditional areas (Drummond 1999).

A large number of women choose to participate in training in order to gain and retain employment and want learning which is current and relevant, competency-based and directly linked to employment skills. They want to see that they are training with real prospects of employment. Despite this motivation, many women

are not supported or 'driven' by employers (Connole 1997; Baker & Wooden 1995). For women with family responsibilities in traineeships or receiving income support, low levels of income combined with transport, housing and childcare costs and the costs of training itself, are major barriers to accessing VET, suppressing demand.

non-English-speaking background

Literacy, numeracy and basic English are essential skills for people from non-English speaking backgrounds, particularly as a starting point for further study, for self-confidence, and to improve work prospects. Without these skills they are at a severe disadvantage. It is therefore not surprising that preparatory courses and courses which focus on these skills are the greatest area of demand for this group (Golding & Volkoff 1998b). Another factor driving people of non-English-speaking backgrounds to study is a lack of recognition of their overseas qualifications, and their need to become employable quickly. There is a need to build upon existing skills and qualifications (Golding & Volkoff 1998b). To encourage successful completion of courses by people of a non-English-speaking background, VET staff should be better informed and trained to meet the specific needs and cultural sensitivities of this group (Golding & Volkoff 1998b). Typically people of a non-English-speaking background are concentrated in occupational levels where the most change is occurring, and VET policy-makers need to be aware of this (Harris 1996).

indigenous people

Indigenous participation in VET is significantly lower than that of non-Indigenous Australians, particularly in rural and isolated areas. To encourage participation in VET, courses need to involve Indigenous people in the initiation and development of programs, use Aboriginal modes of delivery, be linked to Aboriginal community development and aspirations, and have achievable and appropriate educational outcomes (Arnott 1997). VET courses for Indigenous students are more effective in terms of completion, status and competence of students if they are delivered on site, preferably on the job and are encapsulated in a community's life and development (Arnott 1997).

Demand by Indigenous students is restricted by a need for more adequate information on VET program options, and encouragement to boost the confidence needed simply to apply for entry (Golding & Volkoff 1998b). Ongoing support is essential to overcoming problems with literacy and numeracy. Unwillingness by providers to support programs distant from the host institution further contributes to the unmet demand for VET from Indigenous people (Arnott 1997). Physical access to

courses could be assisted in part by improved use of new technologies through existing providers and community organisations (Golding & Volkoff 1998b).

people with disabilities

The needs of students with disabilities are varied, depending on the type of 'disability' affecting their learning. There are, however, common needs. Firstly, to ensure ongoing participation in VET, 'disabled' people need continuity of support from an informed person they trust and know well. Before starting the course, learners need appropriate advice and information about the course and about the support available, as well as links to other agencies, modules and post-training options (Buys, Kendall & Ramsden 1999; Golding & Volkoff 1998b). VET needs to be highly flexible and aware of specific and individual needs, and sensitive of the self-confidence of learners with a disability in order to sustain demand from this group.

youth

Wooden and VandenHeuvel (1999) examine Australian Bureau of Statistics data and report a large proportion of young adults aged 20–24 appear to be inactive in terms of both employment and education. Young women participate in VET less than young men, reflecting for some the impact of child-rearing (Wooden & VandenHeuvel 1999). Eligibility for traineeships has impacted on the ability of 20-to-24-year olds to access VET. Over the period 1992–97, the years after which this group became eligible for traineeships, there has been a 19% increase in participation. In general, participation data collected by NCVER show that part-time study has been the preferred mode of attendance for this group (Ball 1999).

A number of reports (Education Department Tasmania 1998; Smith 1998; Carrigan 1998) have expressed a concern about language skills as well as literacy and numeracy in young people and those entering the Australian workforce. The lack of these skills is not only creating problems in finding employment, but is a barrier to further education and training in general (Marsh & Williamson 1999; Smith 1998).

There has been a shift towards a greater concentration of young adults in small firms which tend to provide less training. A number of studies have also found that more young adults are being found in low-skilled positions (Wooden & VandenHeuvel 1999; Baker & Wooden 1995). The available number of highly educated young people is outstripping demand by enterprises (Wooden & VandenHeuvel 1999). Ball and Robinson (1998) found that a large number of

apprentices and trainees in the 15–19-year-age group are training in industries that are forecast to decline relative to other industry sectors to 2000–01. These people will need and demand retraining to continue their working life in other industries.

the unemployed

The industry and enterprise-focussed nature of VET reform and the articulated needs of industry and enterprises are only marginally relevant for a large number of jobless persons (CEET 1998). The long-term unemployed often have low literacy and numeracy skills (Falk forthcoming). It is significant that there are no recognised, national stakeholder bodies representing the needs of long-term unemployed people. This makes it difficult to develop and implement a strategy inclusive of the high proportion of long-term unemployed in VET (Golding & Volkoff 1998b). Currently long-term unemployed people are more likely to participate in access and preparatory programs in VET rather than in vocational programs (Golding & Volkoff 1998b). Their demand for VET is motivated by a desire to improve their chances of finding employment, or simply for learning in its own right. Misko (1999) points out that unemployment is concentrated in regional and provincial centres, indicating a greater need for training outside capital cities.

For students of VET in custody, supply of VET is often limited by the corrections authority. There is a demand for a greater variety of customised and flexible courses, accessible by statutory right (Golding & Volkoff 1998b).

The constant changes in technology means that those seeking to re-enter work need to be constantly training and re-training, particularly in growing areas such as knowledge work and the increasing use of information technology (CEET 1998; Doyle, Kurth & Kerr 1999). Due to low income, many long-term unemployed have limited access to new technologies, especially in their home, resulting in demand for VET that provides ready access to new technology (Golding & Volkoff 1998b). Other common problems of the long-term unemployed include low literacy and numeracy levels, negative experiences of school, limited financial support, and low self-esteem (Golding & Volkoff 1998b; Marsh & Williamson 1999; CEET 1998). VET needs to address these problems by considering literacy and numeracy support and encouraging and enhancing other literacies to stimulate greater participation by these people.

Unemployed people with low self-esteem often receive poor counselling which ignores what the individual wants as a vocation (CEET 1998). This has resulted in a perception by some individuals that the training encouraged by government support

agencies is only to get people off the dole rather than addressing the real problems of the unemployed (CEET 1998); that is, government support agencies are the ones demanding VET for this group, not the individuals themselves. Individuals need better counselling detailing programs and services, information about pathways and possibilities through study, and information on how to access support (Golding & Volkoff 1998b).

older people and others outside the present and future workforce

Work may not be the only motivation for vocational education and training. For people with disabilities, life skills and coping independently are more important motivations—work is just a subset (Schofield & Associates 1999a). Older people who have retired from the workforce are also actual and potential clients of VET. There has been little research done on participation in VET by those outside the workforce. One of the few studies conducted found that senior citizens make little use of VET, either perceiving it as irrelevant or anticipating a return to a formal schooling method which is not appropriate (Millar & Falk 2000). Many people would like training and development of those not in the workforce to be recognised as an economic and social benefit to the community and society (CEET 1998).

policy implications

It is clear from the literature reviewed that individuals have a longer-term view of training needs. Policy should offer more support to individuals to act in terms of choice of VET provider and course. Support in making choices should be accessible through a variety of places such as employment agencies, workplace human resources sections, and community centres. Literature reviewed also suggests that public providers are more accessible to individuals, whereas a lack of information on private providers and expense may be a discouraging factor. Policy should focus on providing individuals with support and facilitation in articulating needs and meeting the identified demand for VET through public and private providers. Places where individuals can seek advice on training to meet their individual needs should be widely publicised.

To enhance the training market for individuals, more attention needs to be paid to reducing the rigid administrative rules and boundaries, and deliberate action taken to increase the capacity of providers to differentiate their training products and services (Kinsman 1998). At present, adult and community education is actually providing cheaper VET courses for those who cannot afford mainstream, industry-driven accredited and recognised courses (Schofield & Associates 1996).

Personal support such as housing, transport and a living income is perhaps beyond the scope of VET systems, although it needs to be considered by policy-makers to give people the capacity to meet all the costs associated with desired courses. The impact of policies from other areas of government, including social welfare policies, on demand for VET should be monitored and action taken when policies produce conflicting impacts.

Clearly there is an ever-growing demand for courses which address personal development and literacy and numeracy problems. Policy-makers need to consider funding and other forms of support for such courses, since generic, life skills are essential to learning in any context and encourage demand for and successful completion of further training.

demand by enterprises

introduction

The existing and emerging demand for VET by enterprises, and the benefits of participation are discussed in this chapter. Price and cost issues which are a major determinant of demand by enterprises more so than of demand by individuals are discussed in this chapter. The modes by which businesses prefer to and do acquire skills, and what motivates businesses to participate in VET are explored in order to understand how demand for VET varies according to delivery mode. Continuing the focus of this publication on demand by various client groups, the extent of current met demand, or participation, of large and small businesses is compared, followed by consideration of factors or policies which limit or encourage demand for training. The issues which arise from the relationship between businesses and schools and VET are also reviewed. Contradictions between expressed 'wants' (demands) and real training needs, especially for small businesses, are found in the literature reviewed. A discussion of VET policy direction, especially in relation to training support and facilitation, and the role of ITABs concludes the chapter.

Enterprises benefit from training through the potential for improved productivity, profits and a more secure future (Catts 1998), although it is difficult to measure returns to enterprises from training (Blundell et al. 1999, p.11).

Enterprises benefit from training through the potential for improved productivity, profits and a more secure future (Catts 1998), although it is difficult to measure returns to enterprises from training (Blundell et al. 1999, p.11). Enterprises consider training as just one of the means available to improve efficiency and profitability and to satisfy immediate needs (Kilpatrick & Crowley 1999). Other means include investment in plant and equipment, marketing and hiring in particular services. Decisions to invest in VET therefore depend not only on the price of VET

and quality of available supply of VET, but also on the relative costs and benefits of alternative investments that could be made by the enterprise.

International research suggests that benefits from education and training are often shared by enterprises and employees, with the type and source of enterprise-sponsored training affecting the distribution of returns (Blundell et al. 1999).

Many enterprises, particularly small business, want to recruit people who already have the specific skills required (CRLRA 1999). By way of contrast, a number of other studies have found that some enterprises are more concerned about appropriate characteristics and behaviours and basic literacy and numeracy skills (Marsh & Williamson 1999; Ferrier & Wells 1999). These firms then commit to training to ensure that staff may perform the work required of them efficiently.

Just as there are tensions between the goals of enterprises and individuals from vocational education and training, so are there tensions between what is best for the nation and what is best for the enterprise. The training that delivers swift improvements in productivity to enterprises does not necessarily provide a stock of workers with the right mix of foundation generic skills, specific skills for current needs, and generic and specific skills development for the future (Yeatman 1994; Wolf 1996).

The recent expansion of the national VET system has brought many employers in industries which have not traditionally trained through apprenticeships into contact with formal training for the first time. Usually the preferred method of training is 'on the job' as this tends to be embedded in 'the structural organisational activities of the workplace' (Billett & Hayes 1998, p.103). Workplace learning is more immediate, in context, cost-effective, enhances the social relations of the workplace, is less intimidating and allows for more contact before and after training between the trainer and worker (Virgona et al. 1998; Harris 1996). In short, it gives greater adaptability and transferability of learning. There is a danger however, that the training given may be limited only to the interests of the host enterprise, and it may only focus on what must be learned rather than how it is learned (Harris 1996).

As firms take on new technology, the need for new skills in new areas also increases. The use of new innovations often determines whether a firm will train or not (CEET 1998). The transferability of training is lower when workers move to industries with high rates of technological change (Blundell et al. 1999, p.9), thus these enterprises have a relatively higher demand for VET. While traditional skills forecasts may not predict these new areas, monitoring can give an indication of the future direction of demand for skills and training.

Discussing what TAFE could do to meet the needs of enterprises, Hewitt (1999) promotes a system which is public, and trains for both specific vocational skills and broad-based, generic and transferable skills. Teaching professionals need to work with industry and enterprises to develop and deliver training (Hewitt 1999; Harris 1996). According to the peak body, the Council of Small Business Organisations of Australia (Bastian 1998), they must understand the needs and everyday experience of small business. The recognition of non-institutional learning through recognition of current competence (RCC) is an area which needs further development and better promotion to enterprises in order to increase demand for formal VET (Hewitt 1999; Leyne 1998; Barrett 1998). The system of training needs to be reliable, of quality and have some degree of stability. Owen and Bound (1998) in a survey of Australian peak industry bodies, found that many reported that enterprises in their industry experience a sense of frustration with the constant changes occurring to accredited training arrangements.

price and cost issues

Training may often be perceived by enterprises as an unavoidable cost rather than a desirable investment (Harris 1996), although recent case studies of workplace and TAFE-based courses in the automotive, retail and hospitality industries suggest that employers believe that the benefits of training in terms of higher productivity outweigh the costs (Symmonds et al. 1999).

Enterprises want training that is enterprise-specific but which also minimises immediate costs and consequential increases in labour costs arising from a higher level of skills (Kilpatrick & Crowley 1999; Kinsman 1998). The relevant economic theory says that enterprises will pay for training that is specific to the enterprise, but are reluctant to pay for general skills that the employee could take to another enterprise. This is because the training enterprise runs the risk of not being able to recoup the costs of general training. Enterprise-specific training costs can be recouped through wages that are lower than the value of the employee's productivity, without the risk of the employee leaving for a better paid job using the skills elsewhere (see, for example, Norris 1996, pp.85–7). However, an overview of international studies finds that employees do not pay for most of their general training yet still benefit from higher earnings. Stern (1995, p.174) suggests this is because employees are unsure that other enterprises will recognise the value of their training.

The Australian Bureau of Statistics' training expenditure survey measured employer training costs for the September quarter of 1996 and found that half of

those employers who provided structured training spent 3% or more of gross wages and salaries on training. Thirty-five per cent of employers provided structured training in that quarter. Employers who spent 3% or more in the September quarter of 1996 reported increases in expenditure on structured training in the 12 months to February 1997 (ABS 1998, pp.4–5).

There have been attempts in Australia and overseas to influence enterprise demand for education and training by legislation, subsidies and levies on employers who fail to provide a prescribed level of training. The Australian Training Guarantee Levy, which operated from 1990 to 1993, required medium and large employers to spend at least 1.5% of their payroll costs on training. A number of researchers found that the levy was not successful in establishing a training culture among enterprises, and sometimes prompted enterprises to undertake unnecessary training, although the impact of the levy was hindered by a downturn in enterprise profitability and administrative inefficiencies (Sloan 1994; Beresford & Gaite 1994; Jennings 1992). Overseas studies suggest that a legal obligation on employers can have an impact in terms of provision and distribution of training and on outcomes. For example, the French legal obligation on employers to train has increased training opportunities compared to the United Kingdom, but has also encouraged French employers to provide their own training which has led to poorer outcomes than in the UK (Hocquet 1999).

An Australian study that attempts to compare the costs of workplace and institution-based training finds that workplace training can be cheaper; however, this difference is reduced or disappears if a workplace coach or mentor is provided (Symmonds et al. 1999). They also find considerable variation in government contribution to training costs. The authors suggest that further research is needed into the relative cost of modes of provision, including establishing whether the preferred unit of analysis should be cost per trainee, or cost per module or course completed (p.52).

Wages for trainees and apprentices who must enter into contracts of training are kept low by legislation. This recognises the costs of training borne by enterprises, and also means that enterprises and employees share the costs of training. Low wages during training are an incentive to enterprises to provide training in transferable skills. Despite these reduced wages, enterprises bear most of the cost of training (traditional trade) apprentices (53%), with the public sector contributing 28% and apprentices themselves 19% (Norris, Dockery & Stromback 1997, p.11–12).

There has been a reduction in the level of employer-sponsored, entry-level training in recent years when the impact of government interventions, including financial support, is taken into account. The influence of subsidies on demand from enterprises can be seen in the decline of enterprise sponsorship of longer-term apprenticeships that has occurred alongside an increase in participation in shorter duration traineeships (Billett 1998). While both attract subsidies, new arrangements for the shorter traineeships have proved more attractive to enterprises. Billet argues that this fluctuating demand means that enterprises cannot be relied upon to maintain the national skills base if long-term goals are to be realised (p.65).

extent of **participation** in VET

Larger firms participate in formal VET to a greater extent than smaller firms (Billett & Cooper 1997; Baker & Wooden 1995; ABS 1998; CEET 1998). They are more likely to have successfully negotiated suitable flexible training arrangements under user choice (KPMG 1998). Large employers are also able to offer more support for their employees' training—in financial and other terms—than can small firms. Casualisation, outsourcing, the decline in public employment and union membership and the growth of the self-employed all diminish the extent of enterprise support for training (CEET 1998). Staff usually identify their own training needs, but the level of support they receive from their employers depends on the employers' perception of relevance and the objectives of the organisation in which they are working (Ferrier & Wells 1999). New firms are less likely to express a demand for training, and act on it, than older firms (Baker & Wooden 1995).

The policy of user choice has benefitted enterprises by providing a greater range of training options, an increased interaction between enterprises and providers—particularly TAFE, and a more business-like approach by TAFE (Smith 1999). However, there is concern that quality of education and training and assessment is being eroded by the proliferation of RTOs and the user choice system (Hewitt 1999; Smith 1999).

According to Australian Bureau of Statistics (ABS 1998) figures, during the 12-month period ending in February 1997, 61% of all employers provided some training for their employees. More enterprises provided unstructured than structured training, with only 35% providing any structured training, including VET. The main factors prompting structured training were technological and other changes to practice, and the requirements of regulations or awards. Structured training was most likely to be provided for workers in the associated professional classification and

least likely to be provided for those in unskilled classifications (ABS 1998). On an industry basis, employers in government, administration and defence and electricity, gas and water were most likely to provide training (81% and 48% respectively), while employers in the accommodation, cafes and restaurants and cultural and recreation services were the least likely to provide training for their employees (both 10%) (ABS 1999, p.85).

The Australian Bureau of Statistics education and training survey shows that fewer employers provided structured training in the September quarter of 1996 compared to the same quarter in 1993 (18% compared to 23%), with manufacturing recording the greatest reduction (ABS 1999, p.85). Demand from enterprises for apprentices and trainees is expected to fall, with as many as a third of enterprises saying that apprenticeships and traineeships do not meet the needs of their business (Allen Consulting Group 1999, p.72). As well, there is concern about the low level of award completion in courses sponsored by enterprises (Schofield & Associates 1999a; Billett & Hayes 1998).

The characteristics of a business as a whole—its rate of change, 'the degree of danger or liability involved in its activities, and the existence of programs like Total Quality Management—influence the amount of learning (Field 1998). Size, specialisation and location are factors which influence an enterprise's decision to invest in VET (Billett & Cooper 1997). This is consistent with overseas research that shows that large enterprises with more complex work practices are more likely to provide training (for example, Lynch & Black 1997).

size of business

There is a low incidence of all types of formal training in small business, compared to larger firms (Baker & Wooden 1995; CEET 1998; Billett & Cooper 1997; Field 1998). On average, employees in large organisations received more than two and a half times the amount of hours of structured training received by their counterparts in small organisations and one and a half times the amount received in medium-sized organisations (ABS 1997). A study by Kilpatrick and Crowley (1999) found that less than a quarter of small business owners and managers had themselves participated in training of any kind since commencing business. This low level of participation in recognised training has implications for a flexible and mobile workforce.

Small firms tend to use training which is directly related to the production of the final output, whereas large firms can devote more resources to training in management and support functions (Baker & Wooden 1995).

Small business employers are also investing in entry-level training at a lower rate than larger enterprises (CRLRA 1999; Billett & Cooper 1997). Financial considerations have the most influence on small business participation in VET. Long-term survival is the primary concern—training is only of interest where it is perceived to be relevant and will improve the performance and efficiency of the business (Catts 1998; CRLRA 1999; The Moreland Group 1998). Clearly, many small business owners do not perceive the benefits of training as being equal to the investment of time and money to train. Billett and Cooper (1997) found little interest by enterprises in securing detailed information about returns on training expenditure. However, those businesses which have participated in formal, accredited training appear to be more successful (Kilpatrick & Crowley 1999). By promoting the benefits of training, VET providers could encourage more participation (Billett & Cooper 1997; Kilpatrick & Crowley 1999).

Those small business owners and managers who do see benefits in formal training are active participants; others are just too busy working to give training a high enough priority to find out what is available, or to take themselves or their staff away from the job. Those who express negative attitudes usually perceive training to be of poor quality and low relevance, or simply too expensive. There is evidence that those businesses that have engaged in structured training are more likely to plan to participate in the future (Kilpatrick & Crowley 1999).

The preferred and most popular form of training is on the job, specific, informal and non-structured—'learning by doing.' This is partly due to time and cost constraints, but also because of perceptions that formalised training is less relevant and more detached from the real world, and because of a desire for independence (Kilpatrick & Crowley 1999; Billett & Hayes 1998; Field 1998). Sources of learning outside the business include suppliers, customers, and other businesses (Field 1998).

There are a number of difficulties and disincentives which contribute to the low levels of participation by small business. There is a high rate of business failure amongst small firms, an absence of well-developed internal labour markets, and low rates of unionisation in small workplaces. Small firms tend to hire part-time, casual and young workers with less secure job tenures for whom investment in firm-specific skills will not be attractive (Baker & Wooden 1995).

The location of the training influences participation in training, especially for rural and regional businesses. Employees and employers must travel long distances to participate in off-the-job training, which has a large impact on the productivity of the business for the time that they are away (CRLRA 1999; Leyne 1998). Small firms are more likely to conduct in-house training courses outside normal working hours

(Baker & Wooden 1995). Kilpatrick and Crowley (1999) note that small business owners and managers prefer the short, single sessions of business meetings and seminars to prolonged, accredited formal courses. The level of education of the owner/manager of a business may in part influence the enterprise's commitment to VET. In general, owners/managers train less than their employees (Kilpatrick & Crowley 1999).

Many small business managers and owners are not resourced or skilled enough to determine training needs in a competitive market, and lack negotiating power, which results in a tendency to take what is offered, often from TAFE (Baker & Wooden 1995; Billett & Hayes 1998; Catts 1998; CEET 1998; KPMG 1998; The Moreland Group 1998). There is confusion and lack of knowledge about the training system and the requirements of funding bodies. The documentation supplied by training providers is frequently insufficient and inhibiting (Catts 1998; Billett et al. 1997). Catts (1998) and Kilpatrick and Bound (1999) point to a role for independent training brokers to identify training needs and represent small firms in negotiations with training providers.

Women business partners play an important role in keeping small businesses aware of training reform (Barrett 1998). A study of learning for business management in farming found that women were more proactive in seeking learning opportunities (Kilpatrick et al. 1999). Barrett (1995) found that Queensland women business owners across a variety of industries are better at seeking advice than their male counterparts, but have access to fewer sources of advice.

VET-in-Schools programs

VET-in-Schools programs rely on the willing participation of enterprises. Benefits to business from these school–industry programs include increased productivity, enhancement of the company's skill base, a more effective and increased level of training company wide, more efficient and effective recruitment, encouraging students into their industry, recognition and promotion of the business within the community, personal satisfaction, and 'dollar profit' (Misko 1998; Figgis 1998). These are benefits which schools should be highlighting when setting up programs with enterprises, as charitable feelings and altruism are bound to fade with time as the novelty wears off.

Supporting Helms and Nelson (1997), Figgis (1998) finds that excellent communications between enterprises and schools is critical to the success of VET-in-Schools programs. Enterprises surveyed expressed a desire to know the full extent of

the programs of their students so that the workplace component could be integrated and assessed in the most effective way.

There is a lack of understanding about new developments in education (a phenomenon not restricted to VET in schools) amongst employers, resulting from a lack of information. There is a need for information that considers details such as cost, time, roles and responsibilities, student profiles and skills required of employees (Helms & Nelson 1997).

Employers indicate a lack of confidence in teachers' knowledge, experience and skills to participate in the delivery of VET-in-Schools programs. Work placements for teachers in relevant enterprises are suggested to overcome this. There seems to be a common perception among teachers that vocational programs are 'second-rate', and there is concern by employers that only the less academically achieving students are being directed into workplace programs (Helms & Nelson 1997).

contradictions

There are a number of contradictions in what enterprises say they need, others' perceptions of enterprise needs and what emerge as real training needs (Dickie 1999). Employers say they want job-related skills which can be turned to use quickly, but Dickie (1999) finds that there is in fact a shortage of 'soft skills' in areas like conflict resolution, leadership, team-building and workplace communications. Workers who perceive their training to be inadequate state that the areas, such as management and professional skills, induction, and sales and personal services need attention (Baker & Wooden 1995).

Perceptions of training as a cost rather than an investment lead to a tendency of businesses to under-invest in the training and development of their staff (Ferrier & Wells 1999). Instead, they rely on the public sector to support the required levels of education and training. Ferrier and Wells (1999) suggest that regular auditing of the skills and capabilities of staff could change current practices and attitudes towards training.

Despite many small businesses finding informal on-the-job training to be the most desirable form of VET, there have been complaints that the skills learnt are unrecognised and under-valued (Baker & Wooden 1995). While accreditation is not strictly a necessary part of the training process, particularly where employers are concerned (Catts 1998), it becomes an issue when employees wish to change employment, as discussed earlier in this review.

Enterprises value ITAB-led initiatives that lead directly to improved training outcomes, for example, by negotiating with providers to make sure training is relevant to the needs of various sections of industry. Further, there is a clear expectation among a sizeable minority of enterprises that ITABs should be actively involved in training delivery, which is counter to current policy (Wooden 1998a).

policy implications

Current directions in VET policy are based on the articulated needs of enterprises and industry (ANTA 1998). Enterprises are benefitting from government-subsidised traineeships, which means being able to train people without spending a lot of money (DETIR 1999). Changes to funding arrangements are likely to affect enterprise demand for training. Understanding by enterprises of the benefits of training is patchy, and unless understanding of the benefits improves, subsidies will continue to have a major impact on demand by enterprises.

The policies which impact upon and encourage enterprises to participate in VET need to be reviewed. Consideration of small business, regional difference, and the balance between the short-term needs of enterprises and the longer-term needs of employees is required. Billett and Cooper (1997) suggest that we do not fully understand the long-term national consequences of investment in training which is at a low level and is enterprise-specific. Further research is needed to investigate whether the overseas experience of enterprises' subsidising generic skills formation is occurring in Australia. Billett and Cooper also question the policy focus on providing enterprises with choice rather than support and facilitation in articulating needs, and then meeting their identified demand for VET.

Policy needs to ensure that the user choice system provides consistent, quality education and training across all providers which meets the needs of enterprises but does not restrict the careers of employees. This could be achieved, for example, by incentives to complete qualifications (or the parts of qualifications) that may be beyond the immediate requirements of enterprises. Advice from providers to enterprises must be open (not slanted to suit the needs of the training organisation) and consistent. For example, the price list needs to reflect the true cost of delivery, and difficulties and delays with processing paperwork need to be resolved (Smith 1999).

Suggested policy directions to encourage enterprise demand for VET include financing an initial training needs analysis for small business (Catts 1998), and supporting training brokers in negotiations between enterprises and providers (Kilpatrick & Bound 1999).

demand by **industries**

introduction

This chapter covers industry's investment in VET, as well as the implications of national VET policy's investment in an industry focus. ITABs are currently the mechanism for identifying and predicting changes in demand for VET at a detailed level. The strengths and weaknesses of the established groupings of industries for this task are considered. The current role of ITABs and their influence on awareness of training needs, industry stability and direction are outlined. The effect of unions and industrial relations policy on training demand is also discussed. The current focus of ITABs and their relevance and general helpfulness to the groups they represent is discussed in relation to VET policy. Following the full discussion of price and cost issues in the demand for VET by enterprises in the previous chapter, price and cost issues are not separately considered in this chapter.

ITABs play a role in raising awareness of training and ensuring that relevant training is available in modes that suit various sections of the industry.

The national strategy for VET is based on national competency standards developed by industry (through ITABs), to specific industry skill requirements (ANTA 1998). Industry has an interest in portability of skills for its workforce, and wants the training provided to be specific to the employees' work (The Moreland Group 1998). The structure of the strategy around ITABs was developed to counter the effects of 'parochial' enterprise-specific training by enterprises inhibiting individuals' mobility and/or career progression (Billett & Hayes 1998). However, the many sectors, enterprises and individuals within the industry groupings have various and sometimes contrasting needs when it comes to training. Kirby (1998) claims that because there are many different perspectives and methods of training employees within the same industry, the term 'industry' is 'almost meaningless in terms of where the training is required' (p.73); under these circumstances, a focus on

enterprises is perhaps more appropriate. Real and emerging demand for training could perhaps be more readily identified across occupational than industrial groupings. In a report to ANTA that classifies Australian occupations according to function using Australian Bureau of Statistics Census data and a classification framework developed by Carnevale and Rose in the United States, Doyle, Kerr and Kurth (1999) sort workers into groups according to the functions they perform in their jobs rather than according to industry. They found 'people that work at similar functions tend to have similarities in terms of other things, including earnings and level of education.' (p.7).

ITABs' major functions are to analyse the training requirements of industry, promote training reform and its benefits, provide advice about training and provide a unified industry voice on training issues. Therefore ITABs have an integral role in increasing demand for VET. ITABs advise government about the training needs of the enterprises within their industry so that policy is informed by a sound analysis of the implications. However, a study of employers found that in general, ITABs have limited direct contact with individual enterprises, tending to work through representative structures (Wooden 1998a).

According to findings from an interview survey of peak industry bodies (Owen & Bound 1998), industries more advanced in recognising their learning needs and therefore articulating industry demand, have an agreed sense of direction, common areas of challenge, common experiences, common strategies to cope with change, and anticipate an increase in the recognition of skills. CEET (1998) found that technological change and quality assurance are the major drivers of the training needs of industry.

specific **industry** demand issues

The historical and cultural differences related to the expectations of employees and traditions of training in various industries affect the level and type of training demanded by different industries (The Moreland Group 1998). ITABs play a role in raising awareness of training and ensuring that relevant training is available in modes that suit various sections of the industry. In industries such as hospitality and tourism where the organisational structure of the ITAB network has been relatively stable, it is likely that there will be a greater awareness of that ITAB and its roles and functions (Wooden 1998a).

Shah et al. (2000) note that ITABs can produce most of the statistics on the stock of skills available in their industry from Australian Bureau of Statistics data.

Using this information, they estimate replacement demands ranging from 0.2% per annum for miscellaneous intermediate service workers to 6.2% for elementary food preparation and related workers. These replacement demands are then used in Shah et al.'s Labour Market Training Needs Model to estimate demand for industry-specific training in Victoria.

Current forecasts suggest that, in the medium term, employment and demand for VET in the communications and property, business services and construction industry sectors will increase relative to other industry sectors. Demand will decline in electricity, gas and water, government administration and defence and transport and storage, although some jobs will be available in these sectors, particularly in industries with an ageing workforce (Ball 1999).

The Moreland Group (1998) notes that the hospitality industry in particular is aware of a need to upgrade skills, although external training providers are not highly regarded. The community services, health and seafood industries are least aware of needs to upgrade skills.

The most common motivation for learning (or reason to demand training) in the agricultural industry is a desire to improve the efficiency or profitability of the business (Kilpatrick et al. 1999). Leyne (1998) notes that while many workers in the agriculture industry are classified as 'unskilled', recognition of current competence needs to be used more extensively. As well, the National Centre for Vocational Education Research (NCVER) statistics are not identifying the actual level of vocational education taking place in the agriculture industry.

Knowledge workers are in demand because organisations now recognise that ideas, design, innovation, marketing, monitoring and management are central to the success of all businesses (Doyle, Kurth & Kerr 1999). Training in many knowledge-related occupations provides individuals with skills that are demanded in a wide range of industries.

VET and **industrial relations**

Unions can argue for access to vocational training and career development to be a right associated with employment alongside other rights, such as safe workplaces, non-discrimination and fair wages (Mansfield 1998). International research has found that union members participate in training more than non-unionised workers (Blundell et al. 1999, p.11). However, unions do not appear to have a major influence upon demand for VET in Australia, although a study by Baker and Wooden

(1995) found that unions have a positive training effect, restricted to in-house training. Billett (1998) notes that the decline in the influence of industrial relations practice on VET has reduced consideration of individuals' goals and aspirations in VET curriculum development and decision-making.

Changes in enterprise bargaining that have led to a decline in the perceived importance of education and training are of concern (Harris 1996). Training provisions are less common in enterprise agreements covering small businesses than larger enterprises, and the relatively low rates of unionisation in small workplaces may be a factor contributing to low levels of formal training (Baker & Wooden 1995).

unmet **demand, concerns** and **issues**

Industry demand for VET is restricted by limited procedures and processes for the dispersal of information to the small units which together make up an industry (Owen & Bound 1998).

Wooden (1998a) reported that there are contradictions in the expectations of ITABs. Industry expects the advice to flow down to enterprises, whereas ITAB management is much more likely to regard the upward flow of information to government as more important. However, the lack of responsiveness of the VET system to 'real' industry needs and lack of industry involvement in training reform remains a common complaint among enterprises. Wooden suggests that consideration should be given to refocussing the role of ITABs on the provision of advice to industry, rather than to government.

Billett and Cooper (1997) ask what is the impact upon national VET when publicly funded VET arrangements favour particular industries (for example, metals, construction, hospitality) over others. This could mean that there are high levels of unmet demand in other industries not so favoured.

policy implications

VET policy could reconsider current definitions of 'industry' and whether these definitions are satisfactorily addressing real training needs, or whether training needs previously hidden by traditional 'industry' groupings might be more clearly identified by recognising occupational groups with similar functions. This could apply, for example, to IT functions, researchers and other occupations associated with knowledge work. An occupational approach to identifying training needs and demand might also help to more effectively address the training needs of individuals and small businesses discussed in earlier chapters.

demand by **communities, regions** and the **nation**

becoming a **learning society**

This chapter outlines the importance of education and training to the nation as a whole. General perceptions of learning which may influence demand for VET are discussed as well as the conditions necessary for high levels of skills formation. The economic and social benefits of an educated and trained population to the nation are considered since they are factors which promote and increase demand for VET. The reasons for government contributing to the cost of VET are outlined. The ability of existing VET programs and institutions to meet demand in regional Australia is reviewed, and the recommendations made by researchers to improve opportunities for all communities under the national goals for VET are summarised. To conclude the chapter, the influence of policy on the integrity of the national system of VET is discussed.

> The benefits of people's participation in post-compulsory education include increased tax revenues, greater productivity, increased consumer consumption, increased workforce flexibility, and decreased reliance on government financial support.

Education and training have been identified as critical factors in improving economic capability (Education Department Tasmania 1998; ANTA 1998). Compared to other Organisation for Economic Co-operation and Development (OECD) countries, Australia has a low, post-compulsory education profile. With only 48% of the workforce holding a post-school qualification, Australia ranks fifteenth out of the 22 OECD countries (Education Department Tasmania 1998; ANTA 1998).

Both Dickie (1999) and Clutterbuck (1996) highlight the need to look at society's attitude towards lifelong learning. Examining the language used to describe education and training and qualifications gives an idea of values and attitudes and hence directions for the promotion of lifelong learning. 'Learning' is something everybody values for themselves and is not regarded as valuable to anybody else. 'Study' means 'attractive qualifications' although it is seen as hard, unrewarding and involving sacrifice. 'Training' (VET) is practical, but seen as second rate to university qualifications on a work level, and not relevant on a personal level (Dickie 1999). Dickie suggests that learning could be redefined in a much broader way, encouraging a more 'positive expectation'. Clutterbuck (1996) asserts that at present, the returns from education are perceived in a very narrow way, and perhaps we should start redefining learning by focussing on the notion of personal value (a combination of personal worth and ability to contribute rather than to take from society) in order to become a learning society.

There are certain conditions necessary for achieving high levels of skill formation, including: commitment from a sufficient majority of enterprises; commitment from government; widespread public support; accountability to ensure an adequate quantity and quality of training; opportunities for all to participate; incentives for all young people and workers to train; and flexible teaching/training methods (Hewitt 1999; CEET 1998). The system must provide a balance between the needs of students, society, educators and industry (Hewitt 1999).

benefits of VET to society

The benefits of people's participation in post-compulsory education include increased tax revenues, greater productivity, increased consumer consumption, increased workforce flexibility, and decreased reliance on government financial support (Education Department Tasmania 1998).

There is a vast body of literature focussing on the economic returns of education and training, but the social rates of return have been understated, typically put in the 'too hard basket' as being impossible to measure (Norris 1996). Recognised social and individual benefits include: increasing social capital and social cohesion, increased community service and improved quality of civic life, greater appreciation of diversity, improved ability to use technology, lower crime rates, improved sense of personal worth and higher economic growth as a result of workers with more formal education dealing productively with random economic shocks (Chapman 1998, p.36; Education Department Tasmania 1998; Kilpatrick, Bell

& Kilpatrick 2000). Further, it has been noted that higher levels of literacy and numeracy, more than any other skill or background characteristic, result in higher levels of employment and greater participation in post-compulsory education (Education Department Tasmania 1998; Smith 1994; Marsh & Williamson 1999; Smith 1998). More research is needed to investigate the most effective ways of providing literacy and numeracy training for those whose literacy and numeracy skills prevent them from participating fully in economic and social life.

price and cost issues

The presence of what economists term 'positive externalities' from education and training, such as the factors listed in the previous section, are a justification for society as a whole to contribute to the cost of VET. The dilemma for governments is that there are no empirical techniques or data which allow us to measure or value the externalities, and so no indication of the level of government contribution that is appropriate (Chapman 1998, p.37). Further, it is likely that the value of the externalities will vary with level and type of course. Chapman suggests that levels of subsidy of TAFE (costs of approximately 60% of government outlays on TAFE) imply that the government considers that externalities are large (p.38).

The second justification for government contribution to the cost of VET is market failure. As mentioned earlier, financial markets are reluctant to lend to individuals for investment in education and training because of the potential for students not to complete their course or to fail to obtain a sufficiently high-paying job and so not be able to repay their loan. Another example of market failure is when the market does not demand sufficient places; for example, for training in literacy, or as teachers or plumbers to meet predicted future demand for those skills. Chapman (1998, pp.38–40) suggests that is justification for government to intervene and subsidise the cost of particular types of training.

Equity issues are the third justification for government intervention in the cost or price of VET. Research on issues surrounding the demand for VET by equity groups is discussed earlier.

rural and regional Australia

For successful participation in the global marketplace, it is crucial that regional Australia builds and retains a skilled and adaptable workforce (Owen & Bound 1998). In terms of needs, regions are diverse and quite distinct from one another

(Falk & Kilpatrick 1999). Statistics show that, in general, as the distance from urban centres increases, services, incomes and qualifications all decrease (DETYA 1999; Wahlquist 1999). Access to VET is reported to be limited and difficult, which impacts upon career paths and quality of life for those living in remote areas (Owen & Bound 1998).

Research has identified some differences in the demand for VET from regional Australia. Access to a wide range of VET programs and choice of providers is not the reality for most rural Australians (CRLRA 2000). Young rural clients of VET who combine study and work are less likely to perceive the possibilities of skills transferability than their urban counterparts (Dwyer et al. 1999). The smaller businesses commonly found in rural and regional Australia demand versatility from the individuals who work in them (CRLRA 2000). VET programs in rural schools can play a part in satisfying previously unmet demand for education and training from adults and post-compulsory aged school students in rural communities (Kilpatrick, Bell & Kilpatrick 2000).

Public education systems, especially in rural areas, are perhaps the most accessible option when it comes to VET. They are also an important avenue for meeting demand for VET for those whose finance limits capacity to pay the costs associated with VET. Many studies highlight the need for a quality, public VET system which is accessible to all (Golding & Volkoff 1998b; Schofield & Associates 1999a, 1999b, 2000; Hewitt 1999). Without government support those with limited finance tend to be limited to labour market programs of the lower-cost ACE sector (Golding & Volkoff 1998a).

Many enterprises, and in particular small businesses in regional Australia, are not aware of new training competencies or the range of training available. It would appear that a number of national industry bodies do not have a detailed picture of how the information they provide impacts on rural and regional Australia. Either there is little information being received from enterprises in rural and regional Australia, or this area is perceived as having a low priority (Owen & Bound 1998).

Regional needs, especially those outside urban centres, are hard to gauge and are under-emphasised. Rural enterprises need more effective consultations with training providers (Market Equity 1997). The education and training needs of individuals differ across regions and communities. Mainstream courses designed by centralist providers with little consideration of such localised factors as isolation, climate and culture are unlikely to be relevant to those participating (Arnott 1997). Courses provided must take account of these factors in their delivery. In the interest

of individuals and of the nation, VET providers must be encouraged to support programs distant from the host institution in order to meet the demands of those in regional areas.

There are changes occurring in demand for education and training in natural resource management for landholders who operate in agriculture, forestry, public land management, and related industries. A number of recent policy documents and reports have identified the need for those in rural and regional Australia to better manage natural resources if regions are to be economically, environmentally and socially sustainable (for example, Commonwealth of Australia 1999). Policy changes articulated in 'Skilling farmers for the future' as part of the Commonwealth Budget (Truss 2000) will encourage provision of training in natural resource management to move away from State departments of primary industry to private providers. Dore and Woodhill's (1999) study on sustainable regional development, identified issues critical to the future of sustainability in regional Australia that are echoed in the national policy discussion document (Commonwealth of Australia 1999). Most of those issues revolve around a need to learn in two broad areas; first, technical knowledge and skills and second, the generic, social or 'soft' skills of communication, conflict resolution and working together across sectors.

The VET needs of regions, like the needs of individuals, have been overlooked in favour of the needs of industry, as articulated by large enterprise-dominated representative bodies (Billett & Hayes 1998). Research has found, however, that local planning with local input secures regional needs and produces more successful outcomes than centralised provision of VET (CRLRA 2000; Falk & Kilpatrick 1999; Billett & Hayes 1998). That is, local planning assists in articulating demand and matching it with supply. Communities and regions which are able to plan VET to meet local needs are more likely to be resilient and sustainable (Falk & Kilpatrick 1999). There is a growing body of evidence at the national and international levels that local community and regional level planning for VET is likely to achieve superior outcomes to the top-down, industry-driven planning that characterises the current VET system. 'State and national labour market and training planning is simply not sensitive enough to pick up small scale and localised demand deriving from local circumstances and which may not coincide with state or national training priorities' (Schofield & Associates 1996, p.vii). International and Australian research shows that collaborative approaches initiated at the community and regional levels that build strong partnerships are the most successful (Hugonnier 1999; Dickie & Stewart Weeks 1999; CRLRA 2000).

policy implications

Themes which emerge from the literature reviewed which have implications for policy and demand for VET at a national level relate to access in rural, regional and urban Australia, course tailoring and an approach which values and supports more than one type of learning. Literacy and numeracy support has also emerged as an area of high importance for policy.

To maximise vocational education and training opportunities for all communities and to best meet demand for VET, policy needs to support local provision and planning. This applies especially in rural and regional Australia where a centralist and managerial approach to VET is unlikely to encourage articulation of demand for training, and a range of providers from which clients can choose. Local involvement in policy implementation requires approaches to accountability that permit diversity of implementation across communities.

Many studies reflect a demand for VET courses which have a more 'rounded' approach and vision. Individuals, rural Australia and communities in general are demanding training which is versatile and will meet the requirements of varying circumstances. Policy needs to promote learning which supports self-esteem, confidence, general life skills and other social benefits alongside traditional performance measures for VET. This means that more VET resources would be used outside narrowly defined job-related training.

Since so many studies have noted the ongoing problems of people with low levels of literacy and numeracy in accessing VET and work, it is highly desirable that the VET system and policy pays more attention to this problem (Falk forthcoming; Education Department Tasmania 1998; Smith 1998; Golding & Volkoff 1998b). A multi-faceted approach to literacy and numeracy is called for, with training targetted at those at risk as well as more emphasis on literacy and numeracy in other VET programs.

Developing policy that supports choice, includes a strong public sector (including TAFE and VET-in-Schools programs), and allows individuals, businesses, communities and regions to articulate and satisfy their demand for VET, is a challenge. Networks and leadership that includes a brokerage function, are emerging as key factors in assisting individuals, small business and communities and regions in articulating and meeting demand for VET (CRLRA 2000; Kilpatrick & Bound 1999; Dickie & Stewart Weeks 1999; Falk forthcoming). Brokerage functions should be resourced.

findings and **directions** for future research

Demand for VET comes from individuals (and their families), enterprises, industry, communities, regions and the nation, or society, as a whole. VET is demanded because it assists in meeting the economic and social goals of these groups. There are some tensions between the demands of the groups.

Individuals, communities, regions and society see VET as part of longer-term career and skills plans. They see that VET has a role in achieving social goals as well as economic goals, and have an interest in generic and transferable skills as well as in job-specific skills. Enterprises and industries are more interested in VET for immediate and short-term purposes. They demand VET in order to achieve economic goals, and are more interested in job-specific skills and those generic skills that are applicable to current jobs.

A better understanding of how generic skills are acquired, transferred and applied in a variety of contexts will lead to more informed demand for generic and job-specific VET products, and hence better outcomes from VET.

Establishing demand at a regional or community level appears to be the best way to balance the short-term needs of enterprises and industries with the long-term needs of individuals and their regions and communities. Both economic and social goals will be taken into account when demand is considered from the perspective of a region or community.

This report has identified some gaps in research into demand for VET. Economic and social factors contribute to the demand for VET. There is research identifying the influence of economic factors, such as income and profit or productivity on demand, and there is a small body of research noting that social factors such as personal fulfilment contribute to demand. The relative contribution of

economic and social factors to the demand for VET by various stakeholder groups requires further research.

There is no systematic research into the impact of the price of VET on demand by various client groups (in particular, enterprises and individuals). Such research is potentially difficult because of the large number of other factors that impact on the willingness and capacity to purchase VET. The many changes over recent years in the level and nature of the government contribution to VET (in terms of subsidising prices, reducing costs by extending government benefits to those participating in education and training and the introduction of a training wage that reduces enterprise cost) have contributed to the difficulty. Further research is needed into the relative cost of modes of provision, including establishing whether the preferred unit of analysis should be cost per trainee, per module or per course completed.

In light of the debate about the relative desirability of general education and job-specific training for senior school students not destined for university noted earlier, further research is needed into the desirable balance between general and job-specific education and training. In particular, the role of context in learning generic skills and in the transfer of skills between school and work and between jobs deserves more investigation. A better understanding of how generic skills are acquired, transferred and applied in a variety of contexts will lead to more informed demand for generic and job-specific VET products, and hence better outcomes from VET. Another gap identified in the research is the nature and extent of unmet and unarticulated demand for VET by those not completing senior secondary school, and whether this should be addressed through the school system or by other means.

Potential changes to the ways in which individuals' pay a contribution to the cost of their own VET raised, for example, by Chapman (1998) should be preceded by investigation of the extent to which up-front fees prevent or discourage individuals from participating in various levels of VET and from enrolling with particular provider types, for example TAFE, ACE and private RTOs. Further research into the sources of financial support for the living costs of VET students should also precede such changes, especially in view of Gregory's (1995) suggestion that demand for education and training is based more strongly on the cost of an extra year of education than on expected future earnings.

Demand for training in literacy and numeracy is expected to rise as jobs increasingly require higher levels of these skills. A group identified by research reviewed in the chapter 'Demand by individuals' and whose literacy and numeracy skills prevent them from participating fully in economic and social life, is not

currently accessing training. More research is needed to investigate the most effective ways of meeting the increasing demand for literacy and numeracy training for this group.

The long-term national consequences for international competitiveness and national income of investment in training that is at a low level and is enterprise-specific is an area for future consideration. There is considerable scope for further research in this broad area, which could include inter-country comparisons, large-scale longitudinal Australian studies and case studies. Further research is needed to investigate whether the overseas experience of enterprises subsidising generic skills is mirrored in Australia.

The most glaring gap identified in the report is not a gap in research. It is a gap between the research findings and policy and practice. Three areas stand out in this regard.

First, current policy's focus on the needs of industry and enterprises needs to be re-evaluated in the broader context of the demands of other stakeholders who have longer-term interests.

Second, most demand for vocational education and training continues to be met by the public system. There is evidence that the public system is better able to provide support, especially in literacy and numeracy skill development. It is likely that the demand for literacy and numeracy skills in VET will increase, due to increasing skill requirements in the labour market.

Third, there is scope for greater participation in VET. Reasons why demand is either unmet or unarticulated, include a lack of access for financial or locational reasons, a lack of awareness of VET or its benefits, and negative perceptions of existing VET provision. It is likely that if these issues were addressed, demand for VET would increase.

references

Abbott-Chapman, J 1999, 'The work, study and unemployment mosaic for youth: The search for adult status', paper presented to the National Social Policy Conference, University of NSW, 21–23 July, Sydney.

—— 1994, 'The challenge of retention: Raising and meeting students' educational expectations', *Youth Studies Australia,* vol.13, no.2, pp.17–20.

ABS (Australian Bureau of Statistics) 1999, *Education and training in Australia 1998,* catalogue no.4224.0, Australian Government Publishing Service, Canberra.

——1998, *Employer training practices Australia February 1997,* catalogue no.6356.0, AGPS, Canberra.

——1997 *Employer training expenditure, Australia,* July to September 1996, catalogue no.6353.0, AGPS, Canberra.

Ainley, J & Fleming, M 1996, *School–industry programs: National survey summary report,* Australian Student Traineeship Foundation, Sydney.

Ainley, J & McKenzie, P 1999, 'The influence of school factors on young adult life' in *Australia's young adults: The deepening divide,* Dusseldorp Skills Forum, Sydney.

Allen Consulting Group 1999, *Training to compete: The training needs of industry,* report to the Australian Industry Group, Allen Consulting Group, Melbourne.

ANTA (Australian National Training Authority) 1998, *A bridge to the future: Australia's national strategy for vocational education and training 1998–2003,* Commonwealth Government.

—— 1995, *Annual national report 1995,* 3 v., ANTA, Brisbane.

Arnott, A 1997, 'Vocational education and training partnerships in remote Aboriginal communities', in *Crossing borders breaking boundaries,* eds P Armstrong, N Miller & M Zukas, 27th annual SCUTREA conference, July, Birkbeck College, University of London, pp.21–5.

Ball, K 1999, 'Participation in and outcomes from vocational education and training' in *Australia's young adults: The deepening divide,* Dusseldorp Skills Forum, Sydney.

Ball, K & Lamb, S 1999, 'Student destinations from vocational education in schools' *Australian Journal of Vocational Education and Training in Schools,* vol.2, pp.35–7.

Ball, K & Robinson, C 1998, 'Young people's participation in and outcomes from vocational education' in *Australia's youth: Reality and risk,* Dusseldorp Skills Forum, Sydney.

Baker, M & Wooden, M 1995, *Small and medium sized enterprises and vocational education and training Adelaide,* NCVER, Adelaide.

Barrett, M 1998, 'Women training for transition: Enhancing women's business involvement', in *VET research: influencing policy and practice,* 1st national conference of the Australian Vocational Education and Training Research Association, Sydney, February 1998, pp.76–81.

—— 1995, 'Comparisons of women and men business owners in Queensland: Business problems, strategies and values: Report to the Department of Business, Industry and Regional Development' DBIRD, Brisbane.

Bastian, R 1998, 'Understanding small business in regional Australia—Is our education and training system hitting the right spot?' in *Business and education: Is our education system providing a suitable workforce for our region,* TEAC/LCC, Launceston.

Beresford, K & Gaite, J 1994, 'A cautionary tale: The training levy that misfired', *Personnel Management*, vol.26, no.4, pp.38–42.

Billett, S 1998, 'Changing relationships between the vocational education systems and their clients' *Unicorn: Journal of the Australian College of Education*, vol.24, no.3, pp.60–71.

Billett, S & Cooper, M 1997, *Returns to enterprises from investment in VET*, NCVER, Adelaide.

Billett, S & Hayes, S 1998 , 'Balancing the demand: Realigning VET policy and practice' *Vocational knowledge and institutions: Changing relationships*, 6th annual international conference, 2–4 December, Parkroyal Surfers Paradise, Gold Coast, Queensland, conference papers, Centre for Learning and Work Research, Griffith University, vol.4, pp.100–7.

Billett, S, Cooper, M, Hayes, S & Parker, H 1997, 'VET policy and research: Emerging issues and changing relationships' Centre for Learning and Work Research, internet address: http://www.OTFE.vic.gov.au/planning/vetpol/index.htm [accessed: 1999]

Blundell, R, Dearden, L, Meghir, C & Sianesi, B 1999, 'Human capital investment: The returns from education and training to the individual', the firm and the economy', *Fiscal Studies*, vol.20, no.1, pp.1–23.

Broadbent, R 1998, 'National vocational training policy and youth work training', *Youth Studies Australia*, June 1998 vol.17, no.2, pp.11–17.

Buys, N, Kendall, E & Ramsden, J 1999, *Vocational education and training for people with disabilities*, NCVER, Adelaide.

Carrigan, A 1998, *Meeting the language, literacy and numeracy training needs of Queensland apprentices and trainees*, Department of Education Training and Industrial Relations, Brisbane.

Catts, R 1998, 'Training: Who pays—who benefits? The case of small retail firms', in *Different drums one beat?*, eds. F Ferrier & D Anderson, NCVER, Adelaide.

Catts, R, McLendon, E, Forlin, C, Arden, C, James, J & Kossen, C 1996, *Validating training benefits in the workplace*, Centre for Further Education and Training, University of Southern Queensland, Toowoomba.

CEET (Centre for Economics of Education and Training) 1998, *Assessing demand for VET in Victoria: A framework*, CEET, Melbourne.

Chapman, B 1998, 'An economic primer to the government's role in VET', in *The market for vocational education and training*, eds C Robinson & R Kenyon, NCVER, Adelaide, pp.35–45.

Clutterbuck, D 1996, 'A personal development plan for every citizen', *People Management*, vol.2, no.18, p.23.

Commonwealth of Australia, Agriculture, Fisheries and Forestry, Australia 1999, *Managing natural resources in rural Australia for a sustainable future: A discussion paper for developing a national policy*, Canberra.

Country Education Project (Inc.), Youth Research Centre 2001, *Vocational education and training in small rural school communities*, NCVER, Adelaide.

CRLRA (Centre for Research and Learning in Regional Australia) 1999, *A training audit of rural businesses in northern Tasmania*, Launceston Workplace Learning, Launceston.

—— 2000, *Managing change through VET: The role of vocational education and training in regional Australia*, CRLRA, Launceston.

Connole, H 1997, 'Making training work for women—a qualitative study of women's experiences in VET' internet address: <http://www.tafensw.edu.au/genderequi/womcont.htm> [accessed: 1999]

DETIR (Department of Employment Training and Industrial Relations) 1999, *Evaluation of the impact of VET reforms on QLD apprenticeships and traineeships: Report 3 'Outcomes'*, DETIR, Brisbane.

DEET (Department of Employment, Education, and Training) 1995, *Australia's workforce 2005: Jobs in the future*, Commonwealth Department of Employment, Education and Training, Canberra.

DETYA (Department of Education, Training and Youth Affairs) 1999, *Regional participation in higher education and the distribution of higher education resources across regions,* AGPS, Commonwealth of Australia, Canberra.

Dickie, M 1999, 'Lifelong learning for all: Australian attitudes to lifelong learning' *Adult Learning Australia,* no.4, pp.16–20.

Dickie, M & Stewart Weeks, M 1999, 'Training update seminar—November 1999, Presentation on the national marketing strategy for skills and lifelong learning', internet address: http://www.anta.gov.au/lifelong/STRATEGY/TUSNov_keynote%20speech.htm [accessed: 1999]

Dore, J & Woodhill, J 1999, *Sustainable regional development: Final report,* Greening Australia, Canberra.

Doyle, L, Kerr, E & Kurth, B 1999, *Knowledge work: The rise of the office economy,* ANTA, Brisbane.

Drummond, A 1999, 'Policy implications and reflections', in *Australia's young adults: The deepening divide,* Dusseldorp Skills Forum, Sydney.

Dusseldorp Skills Forum 1996, *Career education and guidance for the next millennium,* Dusseldorp Skills Forum, Melbourne.

Dwyer, P, Harwood, A, Costin, G, Landy, M, Towsty, L, & Wyn, J 1999, *Combined study and work paths in VET: Policy implications and analysis,* NCVER, Adelaide.

Education Department Tasmania 1998 'Post-compulsory education in Tasmania', internet address: <http://www.dvet.tas.gov.au/pub_res/POCO/1999/index.htm> [accessed: 1999]

Falk I forthcoming, 'Sleight of hand: Job myths, literacy and social capital', in *Language and literacy policy in Australia: 30 years of action,* eds. J Lo Bianco, R Wickert & Green, B, Language Australia, Canberra.

Falk, I & Kilpatrick, S 1999, 'Re-focussing on learning regions: Education, training and lifelong learning for Australia's well-being', background paper, Regional Australia Summit, October 27–29, Parliament House, Department of Transport and Regional Services, Canberra.

Ferrier, F & Anderson, D 1998, 'Introduction' in *Different drums one beat?,* eds F Ferrier & D Anderson, NCVER, Adelaide.

Ferrier, F & Wells, R 1999, 'Human resource reporting: Some exploratory case studies in Australian enterprises', internet address: <www.education.monash.edu.au/centres/CEET/wp23.htm> [accessed: 1999]

Field, L 1998 'Shifting the focus from "training" to "learning": The case of Australian small business', *Australian and New Zealand Journal of Vocational Education Research,* vol.6, no.1, pp.49–68.

Figgis, J 1998, *Benefits to business through school–industry partnerships,* Dusseldorp Skills Forum, Sydney.

Golding, B & Volkoff, V 1998a, 'Participation in VET in Australia: Different drives, same needs?' in *Different drums one beat?,* eds F Ferrier & D Anderson, NCVER, Adelaide.

—— 1998b, *Creating outcomes: Individuals and groups on the vocational education and training journey,* vols 1–3, ANTA, Brisbane.

Gregory, R 1995, 'Higher educational expansion and economic change: Efficiency and equity in education policy', paper delivered at ANU conference 6–7 September, Australian National University, Canberra.

Harris, R 1996, *Getting to grips with workplace training,* NCVER, Adelaide.

Helms, R & Nelson, B 1997, *Report on structured workplace learning opportunities in small to medium sized enterprises,* Victorian Employers' Chamber of Commerce and Industry, Melbourne.

Hemmings, B, Hill, D & Kay, R 1994, 'Factors influencing the decision to stay on or leave school', *Youth Studies Australia,* vol.13, no.2, pp.13–16.

Hewitt, R 1999, 'TAFE and the training market: Living with the contradictions', *The Australian TAFE Teacher*, April 1999, pp.24–5.

Hocquet, L 1999, 'Vocational training as a force for equality? Training opportunities and outcomes in France and Britain', *International Journal of Manpower*, vol.20, no.3–4, pp.231–3.

Hugonnier, B 1999, 'Regional development tendencies in OECD countries', keynote presentation to Regional Australia Summit, October 27–29, Parliament House, Canberra, Department of Transport and Regional Services, Canberra.

Jennings, L 1992, 'The Australian Training Guarantee Levy and award restructuring', *Journal of European Industrial Training*, vol.16, no.7, pp.3–7.

Keating, J 1998, *Australian training reform: Implications for schools*, revised edn, Curriculum Corporation, Carlton.

Kilpatrick, S & Bound, H 1999, *Training brokers: Networks and outcomes*, discussion paper D10/1999, CRLRA, Launceston.

Kilpatrick, S & Crowley, S 1999, *Learning and training: Enhancing small business success*, NCVER, Adelaide.

Kilpatrick, S & Guenther, J 2000, *Parent perceptions of VET in schools programs*, Launceston Workplace Learning, Launceston.

Kilpatrick, S, Bell, R & Kilpatrick, P 2000, 'Vocational education and training in rural schools: Education for the community', paper presented at AVETRA Conference 2000, 22–24 March, Rydges Hotel, Canberra.

Kilpatrick, S, Johns, S, Murray-Prior, R & Hart, D 1999, *Managing farming: How farmers learn. Final report*, RIRDC publication no.99/74, Rural Industries Research and Development Corporation, Canberra.

Kinsman, M 1998, 'User goals and user choice in vocational education and training' in *Different drums one beat?*, eds F Ferrier & D Anderson, NCVER, Adelaide.

Kirby, P 1998, 'Industry training in Australia today' in *Future training issues in Australia's industries*, NCVER, Adelaide.

KPMG Consulting Pty Ltd 1998, *National evaluation of user choice—Phase 1: Evaluation framework*, ANTA, Brisbane.

—— 1999, *National evaluation of user choice; phase 2*, 3 vols, ANTA, Brisbane.

Leyne, G 1998, 'Rural training' in *Future training issues in Australia's industries*, NCVER, Adelaide.

Lynch, L & Black, S 1997, *Beyond the incidence of training*, London School of Economics, Centre for Economic Performance, discussion paper 362, London School of Economics, London.

Maglen, L, McKenzie, P, Burke, G & McGaw, B 1994, 'Investment in education and training' in *Investing in Australia's future: Achieving the Australia 2010 vision*, eds T Larkin and J Larkin, Business Council of Australia, Melbourne.

Mansfield, B 1998, 'Meeting employee training requirements' in *Future training issues in Australia's industries*, NCVER, Adelaide.

Market Equity 1997, *Western Australia employer satisfaction survey*, Western Australian Department of Training, Perth.

Marsh, A & Williamson, J 1999, 'Early school leavers in rural Australia: Are they all "at risk"?', *Rural Society: The Journal of Research into Rural Social Issues in Australia*, vol.9, no.2, pp.443–54.

McIntyre, J & Kimberley, H 1998, *Planning pathways for women from ACE to VET*, Western Australian Department of Training, Perth.

Millar, P & Falk, I 2000, *Communication and catering competencies: A case study of literacy and numeracy inclusion in a training package*, discussion paper series, CRLRA, Launceston.

Misko, J 1999, *Transition pathways: What happens to young people when they leave school*, NCVER, Adelaide.
—— 1998, *School students in workplaces: What are the benefits?*, NCVER, Adelaide.
Misko, J, Campbell, A & Saunders, J 1998, *Parent perceptions of school–industry programs*, Australian Student Traineeship Foundation, Sydney.
The Moreland Group 1998, 'Small and medium sized business employers perceptions of the value of VET',
internet address: < http:// www.OTFE.vic.gov.au/employers/perceptions/report.htm> [accessed: 1999]
NCVER 1997, *Australian vocational education and training statistics 1997: In detail*, NCVER, Adelaide.
—— 1999, *Australian vocational education and training statistics 1999: In detail*, NCVER, Adelaide.
—— 2000, *Australian vocational education and training: An overview*, NCVER, Adelaide.
Norris, K 1996, *The economics of Australian labour markets*, 4th edn, Longman, Melbourne.
Norris, K, Dockery, A & Stromback, T 1997, *The social return to apprenticeship training*, discussion paper 97/5, The Centre for Labour Market Research, Perth.
Owen C & Bound, H 1998, *Industry learning priorities: Challenges for regional Australia in the context of change*, discussion paper D12/98, CRLRA, Launceston.
—— forthcoming, *Strategic alliances and the new world of work*, NCVER, Adelaide.
Scollay, M 1999a, 'VET in schools boom prompts new training award' media release, 16 June, internet address: <http://www.anta.gov.au/anta_prod/news/mr160699.htm> [accessed: 1999]
—— 1999b, 'Skills for a small planet', address to International Vocational Education and Training Association Annual Conference, 11–13 August, ANA Hotel, Sydney.
Schofield, K & Associates 2000, *Delivering quality: Report of the Independent Review of the Quality of Training in Victoria's Apprenticeship & Traineeship System*, vol.1 & 2, Office of Post Compulsory Education, Training & Employment, Victoria, internet address: <http://www.otfe.vic.gov.au/publi/qualityreview> [accessed: 1999]
—— 1999a, *Report of the Independent Investigation into the Quality of Training in Queensland's Traineeship System*, Vocational Education, Training & Employment Commission, Queensland, internet address: <http://www.detir.qld.gov.au/vetinfo/apptrain/taskforce/ index.html> [accessed: 1999]
—— 1999b, *A risky business: Review of the quality of Tasmania's traineeship system*, vols 1&2, Office of Vocational Education & Training, Tasmania, internet address: <http://www.dvet.tas.gov.au/review/index.htm> [accessed: 1999]
—— 1996, *Think local and compete—an analysis of the role of adult and community education in the implementation of a national system for VET*, ANTA, Brisbane.
Shah, C, Burke, G & McKenzie, P 2000 *Assessing the demand for training: Reforming the Labour Market Training Needs Model; Report to the Office of Post Compulsory Education, Training and Employment*, Centre for the Economics of Education and Training, Melbourne.
Sloan, J 1994, 'Costs and benefits of vocational education and training', in *Research priorities in vocational education and training: A discussion*, Sydney 20–22 April, ANTA Research Advisory Committee, Sydney, pp.129–67.
Smith, D 1994, *Where now? Destinations of young people who miss out on higher education*, National Clearinghouse for Youth Studies, Hobart.
Smith, L 1998, *Apprenticeships and traineeships: Queensland trends*,
internet address: <http://www.detir.qld.gov.au/vetinfo/reports/smith.pdf> [accessed: 1999]
—— 1999, *The impact of user choice on the Queensland training market: a progress evaluation*, internet address: <http://www.detir.qld.gov.au/vetinfo/reports/smithuser.pdf> [accessed: 1999]

Stern, D 1995, 'Market failure in firm-based education and training' in *International encyclopedia of economics of education research studies*, ed. M Carnoy, Elsevier, Oxford, pp.172–5.

Sweet, R 1996, 'School and beyond: A wider view', *Unicorn: Journal of the Australian College of Education*, vol.22, no.3, pp.20–31.

Symmonds, H, Burke, G, Harvey-Beavis, A & Malley, J 1999, *Workplace and institute accredited training*, NCVER, Adelaide.

Teese, R 1997, *Review of Melbourne TAFEs: Seamless education and training*, paper 6, internet address: <http://www.otfe.vic.gov.au/publi/minrev.seamless.htm> [accessed: 1999]

Truss, W 2000, *Agriculture—advancing Australia: Statement by the Honourable Warren Truss MP, Minister for Agriculture, Fisheries and Forestry*, 9 May, Commonwealth of Australia, Canberra.

Vick, M 1994, 'Pathways or yellow brick road? Student perceptions of the relation between school and work', *Youth Studies Australia*, vol.13, no.4, pp.36–9.

Virgona, C, Sefton, R, Waterhouse, P & Marshall, N 1998, *Opening doors—enterprise based training in action: The Tickcart Project case study*, Office of Training and Future Education, Northcote, Victoria.

Wahlquist, A 1999, 'Demographic and social changes in Australia' keynote presentation to Regional Australia Summit, October 27–29, Parliament House, Canberra, Department of Transport and Regional Services, Canberra.

Wolf, A 1996, *The dilemma of qualifications in the workplace: What should employers pay for?*, Making a difference seminar series, Assessment Centre, March, Sydney.

Wooden, M 1998a, 'Employer perceptions of ITABs: Survey evidence' in *Different drums one beat?*, eds. F Ferrier & D Anderson, NCVER, Adelaide.

—— 1998b, 'The labour market for young Australians' in *Australia's youth: Reality and risk*, Dusseldorp Skills Forum, Sydney.

Wooden, M & VandenHeuvel, A 1999, 'The labour market for young adults' in *Australia's young adults: The deepening divide*, Dusseldorp Skills Forum, Sydney

Yeatman, A 1994, 'Who costs, who benefits?', in *Research priorities in vocational education and training: A discussion*, NCVER, Adelaide, pp.115–28.

This review of research on vocational education and training is one of a series of reports commissioned to guide the development of future national research and evaluation priorities.

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